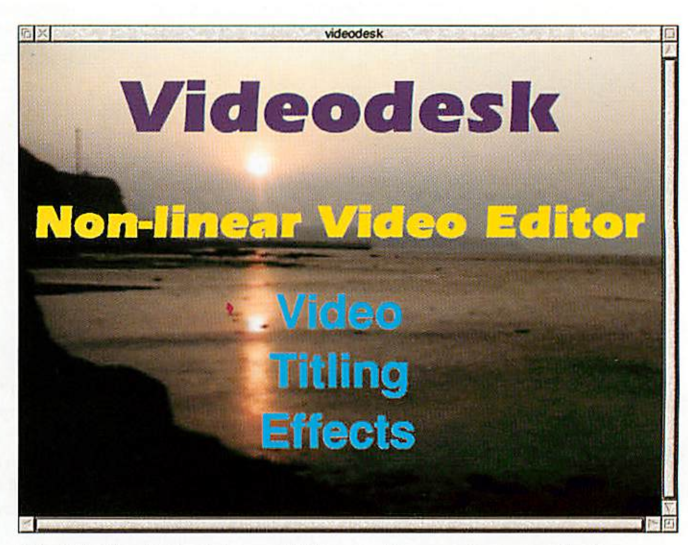

Fantastic Demo and Games CD
The best-selling RISC OS magazine in the world
ACORN USER
Vote in the great Evolution Demo contest
Learn how to create your own demos
tau PRESS
9 770263 745109 02
ISSUE 204 FEBRUARY 1999 £3.95
Plus
HomeHighway: The truth
Games: Hexen and Heretic
SiteSeer: Browse on the cheap
Ovation Pro: Making the best better

Videodesk

Videodesk is a powerful non-linear video editing system. It allows full-size, full-colour and full-motion video to be edited to frame accuracy, and effects and titles added. The finished material can then be output back to video for recording or display.

Key Features:

- Composite and S-Video inputs and outputs.
- 50 fields per second capture and playback.
- 24 bit colour range.
- Resolution of up to 768 pixels x 576 lines.
- High-quality uncompressed still grabs.
- VITC Timecode input and output.
- 16 bit stereo audio inputs and outputs.
- Audio sampling at up to CD and DAT rates.
- Multiple audio tracks (polyphonic).
- Instant playback of edits.
- High performance Replay movie capture.
- Multi-level undo and redo.
- Edit Decision List (EDL) generation.



Sophisticated video editing software is supplied as standard, which is flexible and simple-to-use. Editing is performed on a multi-track time-line with separate audio and video tracks.

Video effects are generated digitally and include over 100 dissolves, wipes, fades and slides. Comprehensive titling software uses the RISC OS outline font system, and titles can be made to scroll, flash, fade and be overlayed onto the video.

Risc TV



Risc TV is a unique multimedia digitiser complete with built-in television tuner and audio processor, which allows you to watch television on the desktop and digitise high quality still images from the tuner or an external video source.

Unlike other digitisers, **Risc TV** uses special hardware to overlay video directly. So, full motion video can be displayed in 24 bit colour, with no processor or bus overhead. Now you can watch television and use your computer!

Scanners & Cameras





We support Epson's range of high quality colour flat-bed and film scanners, suitable for home, school and business applications. All scanners are supplied complete with our renowned **ProImage** driver software.





As the leading independent supplier of digital cameras to the Acorn market, we have support for over thirty different models from the leading manufacturers - Agfa, Epson, Olympus, Sanyo, and Sony.

Contact us for full details of scanners and cameras, and latest pricing information.



For the Complete Picture...

Irlam Instruments Ltd,
Brunel Science Park, Brunel University, Kingston Lane, Uxbridge, Middlesex, UB8 3PQ.
Tel/Fax: 01895 811401 Email: sales@irlam.co.uk
Visit our website: www.irlam-instruments.co.uk





CONTENTS

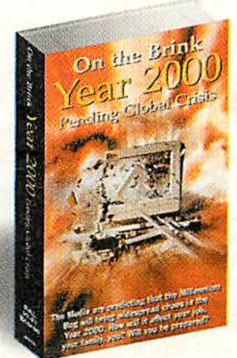
• features

• regulars

• reviews



• education



On the Brink... Year 2000 video offer

Page 14

• hands on

Next month in Acorn User

We get to grips with the Impact database in a new tutorial; review !OHP the latest presentation package; plus the latest news on RISC OS.

On sale 18 February 1999

Published by



Media House, Adlington Park, Macclesfield SK10 4NP
e-mail enquiries@acornuser.com
http://www.acornuser.com/
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Apple Web Offset, Warrington

Editor Steve Turnbull
Art Editor Alan Jones

Contributors
Dave Acton, Simon Anthony, Alasdair Bailey, Mike Buckingham, Ian Burley, Mike Cook, David Dade, Dave Lawrence, Alex Moresby, John Pettigrew, Jill Regan, Mark Taylor, Paul Thomson, Pam Turnbull, Paul Wheatley

Account Manager John Snowden
Ad Production Steve Scott
Production Manager Alan Jones
Finance Manager Charlie Moran
Subscription Manager Richard Siggee
Circulation Director Darren Whiteman
Distribution COMAG (01895) 444055
Managing Director Steve Turnbull

Subscriptions:
Database Direct 0870 6060424
E-mail: dbscot@globalnet.co.uk
13 issue subscription rate: £39.99 (UK), £53.99 (EU), £68.99 (World)

Acorn User is available as speech from the Talking Newspaper Association UK

Internet Services provided by Argonet, www.argonet.co.uk











See us at the Acorn South East Show

Curriculum Training Associates
Dept. AU02, 168 Elliott St.
Tyldesley
Gtr. Manchester
M29 8DS

EMAIL: sales@cta.u-net.com http://www.cta.u-net.com **Tel - 01942 797777** Fax - 01942 797711

OFFER *FREE Internet connection* worth £99
& 6 months 0% interest free credit, on all new systems.

CTA DIRECT ARE NOW *INTERNET SERVICE PROVIDERS*

We can offer Domain names, registration and maintenance, web design, virtual server, secure server, Web server housing, Web & FTP space.

Introductory special offers

***£25.00 Voucher ***
*** with all packs ***

1 years unlimited access for £99inc vat
33K Modem and 1 yr. for £99 (£116.33)
56K V90 Modem + 1yr £125 (£146.88)

Desktop FAX MODEMS

33600 Voice BABT approved	£40.00	**£47.00**
56k x2 / V90 3Com USR	£118.30	**£129.00**
56k Flex /V90 (Rockwell)	**£58.72**	**£69.00**
ISDN modem (external)	**£169.36**	**£169.00**
High speed serial cards from	£78.30	**£92.00**

Internet & Modem Software

Ant Internet Browser	**£94.05**	**£11.51**
ArcFAX Fax software	**£26.38**	**£31.00**
WebsterXL Browser	**£21.28**	**25.00**



High Quality Acorn ERGO mouse £12.00 + VAT

MONITORS

Ring for Specials

	Ex. VAT	Inc. VAT
14" SVGA 0.28 (3yr on-site)	£89.00	£104.58
14" SVGA 0.28 Multi-Media	£105.00	£123.38
15" SVGA 0.28 (3yr on-site)	£110.00	£129.25
15" SVGA 0.28 Multimedia	£129.00	£151.57
17" SVGA Home Multimedia	**£150.00**	**£176.25**
17" SVGA 0.28 (3yr on-site)	**£200.00**	**£235.00**
17" SVGA 0.25 (3yr on-site)	**£300.00**	**£352.50**
17" Iiyama Pro (D'tron)	£340.00	£399.50
19" SVGA 0.26 (3yr on-site)	**£360.00**	**£423.00**
21" SVGA Mitsub' (D'tron)	**£499.00**	**£586.33**
21" SVGA 0.25 (3yr on-site)	**£550.00**	**£646.25**
21" Iiyama Pro (D'tron)	£699.00	£821.33
38" SVGA (1yr on-site)	**£1595.00**	**£1874.13**
AKF18 Multisync	**£115.00**	**£135.13**
AKF53 Multisync (14")	**£165.00**	**£193.88**
AKF50 Multi-sync (14")	**£199.00**	**£233.83**
Multisync A300/3000 cable	£8.50	£9.99

THE BEST! PRINTER PRICES

(Please ring for latest prices)		Ex. VAT	Inc. VAT
Canon BJC80W portable col.		£159.00	£186.83
Canon BJC 250 **colour**	A4	£84.00	£98.70
Canon BJC 4300 colour #	**A4**	**£110.00**	**£129.25**
Canon BJC 4300 Scan ! #	**A4**	**£149.00**	**£175.00**
Canon BJC 4650 colour #	**A3**	**£227.00**	**£266.73**
Canon BJC 4650 Scan ! #	**A3**	**£275.00**	**£323.13**
Canon BJC 7000 colour *	**A4**	**£189.00**	**£222.08**
Epson Stylus 440 colour	A4	£115.00	£135.13
Epson Stylus 640 Colour	**A4**	**£148.00**	**£173.90**
Epson Stylus 850 Colour	A4	£230.00	£270.25
Epson Stylus 1520 Colour	A3	£499.00	£563.87
Epson Stylus photo 700 #	A4	£169.00	£198.58
Epson Stylus Photo EX #	A3	£328.00	£385.40
HP 420	**A4**	**£75.00**	**£88.13**
HP 670C Colour	A4	£99.00	£116.33
HP 690C Colour	A4	£110.00	£129.25
HP 895CXI Colour	A4	£200.00	£235.00
HP LASERJET 6L		**£230.00**	**£270.25**
HP LASERJET 6P		£494.00	£580.45
Photo drivers for #		**£58.72**	**£69.00**
Scanner drivers for !		**£29.79**	**£35.00***

*driver soon *** FREE Acorn driver by request ***

POWERED SPEAKERS

	Ex. VAT	Inc. VAT
60 watts with PSU	£16.98	£19.95
240 watts with PSU	**£24.68**	**£29.00**
Subwoofer system with PSU	£42.00	£49.35
Comms System Mic/Headphones	£8.50	£9.99

6 months Interest Free Credit On All Systems inc peripherals software and 2/3 yr optional warranties

233Mhz SA RiscPC Offers



e.g. RPC SA 2M+32Mb/2.1G/40x CD & 17" monitor for only **£1125 + VAT or £34.00/month via L.C.F. ***

RPC SA bases from **£850** inc VAT or **£22.00**/month via L.C.F. *

AND we will match or beat your best offer

SA J233 Web Wizard

2M+32Mb/2.1G/24x CD/15" mon/Stereo Spk & FREE software inc !Browse, Jarva and Word 6/7 compatibility. Free 56K modem for only **£1145 + VAT**

Finance Deals

* 0% Buy now pay 6 months later.
* Can convert into standard finance package, no penalty
* Low Cost Finance @ 1.5% per month (19.9% APR) upto 5 years to pay.
* No early settlement penaltys.
* Can make additional purchases upto your credit limit without re-application.

***Ring For full details**

A7000+ System Offers

e.g. A7000 +16M / 2.1G / 40x CD /15" mon & Stereo Spk for only £749 exc VAT or **£23.00** / month via L.C.F.

Please ask for other combinations



A7000 + Peak Performer

8M / 2.1G / 32x CD /14" mon / Stereo Spk & FREE Software Bundle for only £749 exc VAT (£808 exc VAT for both bundles)

Casio QV100 Digital Camera



PC s/w only £199.00 exc vat (£233.83)

Acorn & PC s/w £280.00 (£329.00)

Qv11a/Qv100 s/w kit £96 (£112.80)

HARD DRIVES AND SUB-SYSTEMS *WHY PAY MORE???*

A3000 /A3010	Ex. VAT	Inc. VAT	A3020 Ex. VAT	A3020 Inc. VAT
85/120 Mb	£ 99	£116.33	£49	£57.58
170 Mb	£109	£128.08	£59	£69.33
340 Mb	£129	£151.58	£79	£92.83
512 Mb	£139	£163.33	**£89**	**£104.58**
810 Mb	**£149**	**£175.08**	# £124	£175.08
1 Gb	£159	£186.83	# £134	£186.83
2 Gb	£169	£198.58	# £144	£198.58
3 Gb	**£179**	**£210.33**	**# £154**	**£210.33**

A3000 version includes CD ROM i/f which can be used in A3020 or A4000 For external A3000 add £20.00 +VAT
includes partitioning software

A4000/A5000/A400	Ex. VAT	Inc. VAT
420M #	**£49**	**£57.58**
420Mb *	**£76**	**£89.30**
540Mb *	**£85**	**£99.88**
700Mb *	**£93**	**£109.28**
1.2Gb	*** £115**	**£135.13**
2.1Gb	*** £125**	**£146.88**
3.2Gb	* £135	£158.63
4.0Gb	*** £145**	**£170.38**

* inc. internal removable HD & CD ROM i/f. For partitioning software only deduct £25.00 + vat (29.38)

RPC /A7000	Ex. VAT	Inc. VAT
420M #	**£49**	**£57.58**
512M #	**£59**	**£69.33**
1.2G #	**£70**	**£82.25**
2.1G #	**£80**	**£94.00**
3.2G	£90	£105.75
4.3G	**£99**	**£116.33**
6.4G	**£110**	**£129.25**
8.4G	**£129**	**£151.58**
16.8G	**£270**	**£317.25**

limited supply



ACORN TRACKBALL & MOUSE £29.79 + VAT

CD-ROMS

IDE			SCSI		
40x	£49.00	(£57.58)	32x	£70.00	(£82.25)
32x	£45.00	(£52.88)	16x	£40.00	(£47.00)
24x	£39.00	(£45.83)	12x	£34.00	(£39.95)
8x	£30.00	(£35.25)	8x	£30.00	(£35.25)

For EXTERNAL IDE or SCSI 1 add £50.00 + VAT (3.5 IDE driver £15 + vat) IDE int. fitting kit £5 inc.
For external SCSI II add £55.00 + Vat.
Internal SCSI fitting kits from £10 + vat

SCSI HARD DRIVES

540M (limited Stock)	£60.00	(£70.50)
1.0Gb	£70.00	(£82.25)
2Gb (7200rpm)(l.s.)	£110.00	(£129.25)
4.3Gb (5400 or 7200rpm)	£150.00	(£176.25)
4.3Gb (10,000rpm)	£219.00	(£257.33)
9.1Gb (7200rpm)	£255.00	(£299.63)
18.6Gb 7,200rpm	£490.00	(£575.75)

CD-ROM WRITERS



Prices Start from £175.00 +

2x6x Writer (Ide)	£175.00	(£205.63)
4x2x6x Re-Writer	£199.00	(£270.25)
CD-BURN	**£49.00**	**£57.58**
CD-SCRIBE2	**£49.00**	**£57.58**

SCSI 8x **Autochanger** £85.00 + vat (£99.88)

IDE Removable Drives

Zip 100 IDE	£65.00	£76.38
Zip SCSI ext	£95.00	£111.63
Zip SCSI int	£85.00	£99.88

IDE drives require suitable drivers/ hardware

Parallel Removable Drives

Zip Parallel *	£110.00	£129.25
Jaz 1G Parallel*	£189.00	£222.08
Jaz 2G Parallel*	£315.00	£370.13

** all drives include Acorn Software*

SCSI Removable Drives

PD650/CD	£139.00	£163.33
Nomai 750	£165.00	£193.88
Jaz 1G int	£189.00	£222.08
Jaz 1G ext	£199.00	£233.83
Syjet 1.5G int	£199.00	£233.83
Syjet 1.5G ext	£199.00	£233.83
Jaz 2G int	£265.00	£311.38
Jaz 2G ext	£265.00	£311.38

Removable Drive Media

	Ex. VAT	Inc.VAT		Ex. VAT	Inc.VAT
100mb Zip	£8.45	£9.93	1Gb Jazz	£58.00	£68.15
Zip 5 pack	£38.30	£45.00	1.5Gb Syquest	£58.00	£68.15
120mb LS120	£7.50	£8.81			
135 Syquest	£21.00	£24.68	CDR CD-ROM	£1.28	£1.50
230 Syquest	£19.90	£23.38	CDR 10 pack	£10.00	£11.75
270 Syquest	£29.75	£34.96	CDR 25 pack	£21.28	£25.00
650Mb Pan. PD	£19.00	£22.33	CDR/W CDROM	£12.00	£14.10
750Mb Nomai	£38.00	£44.65	CDR/W 10 pack	£100.00	£117.50

Interface Adapters

Storm SCSI 8 bit (A30x0 int)	£88.00	£103.40
Storm SCSI 16 bit (podule)	£96.00	£112.80
Storm SCSI 32 bit (podule)	£128.00	£150.40
Powertec SCSI3 32 bit (Pod)	£149.00	£175.08
Simtec 8 bit (A3000/A3010)	£55.00	£64.63
Simtec 16 bit (AX00/A5000/RPC)	£45.00	£52.88
APDL (ICS)16 bit DMA	£45.00	£52.88
RapIDE32	£119.00	£139.83

Removable IDE or SCSI Housing Unit £20.00 (£23.50)

COLOUR SCSI SCANNERS

P'llel A4 600dpi inc Acorn s/w	**£99.00 (£116.33)**
Mustek A4 600 dpi inc Acorn s/w	**£119.00 (£139.83)**
***Mustek A4 1200 dpi* inc Acorn s/w**	***£149.00 (£175.08)***
Epson GT7000 inc Acorn s/w	**£199.00 (£233.83)**
Epson GT7000P inc Acorn s/w **ask	**£249.00 (£292.58)**

6 Drive CD-ROM SCSI Towers

8x £299.00 exc.
32x £549.00 exc.

StrongARM Special Offer

£259.00 inc VAT (with any Hard Drive / Memory purchase)

3 yr Warranty on ALL Acorn MEMORY *why Pay More??*

ACORN MEMORY NEW PRICES

		Ex. VAT	Inc. VAT
4-8 MB Up. (A310,440,3000*)	⇓	£99	£116.33
4-8 MB Up. (A5000*)	⇓	£119	£139.83
*rework for A3000/5000/25mhz		£25	£29.38
A3010 1-2 MB Upgrade	⇓	£25	£29.38
A3010 2-4 MB Upgrade (exch)	⇓	£45	£52.88
A3010 1-4 MB Upgrade	⇓	£55	£64.63
A3020/4000 2-4 MB Upgrade	⇓	£40	£47.00
A5000 2-4 MB Upgrade	⇓	£45	£52.88
A3000 1-2 MB Non-Upgrade		£20	£23.50
A3000 2-4 upgrade (exchange)	⇓	£45	£52.88
A3000 1-4 MB Upgrade	⇓	£55	£64.63
A3000 Serial Port Upgrade		£23	£27.03
A310 4Mb Upgrade	⇓	£50	£58.75
A400/1 1Mb Upgrade per meg	⇓	£25	£29.38
Risc OS Carrier Board (A310)		£19	£22.33
MEMC 1A upg (short supply)		£45	£52.88
NEW A540 4Mb	⇓	£97	£113.98

RISC PC MEMORY

Also FOR A7000	Ex. VAT	Inc. VAT
8Mb SIMM	£11.00	£12.92
16Mb SIMM	£23.00	£27.03
32Mb SIMM	**£48.00**	**£56.40**
32Mb High Clearance	**£53.00**	**£62.28**
64Mb SIMM	**£85.00**	**£99.88**
128Mb SIMM	**£170.00**	**£199.75**
1Mb VRAM	£38.30	£45.00
2Mb VRAM	**£76.00**	**£89.30**
1-2 Mb (exchange)	£66.00	£77.55

Please ring for latest prices

33 Mhz Arm 3 upgrade

with FPA socket	**⇓£115.00 inc**
with FPA 10 fitted(25Mhz)	**£165.00 inc**

RiscOS 3.11 Rom upgrades

£25.00 exc Vat (£29.38)

NETWORKING

ETHERNET INTERFACES

All ethernet i/fs etc are ANT	Ex. VAT	Inc. VAT
A3000 int 10base2 or T , Access+	£89.00	£104.58
A400 / A5000 10base2 or T Acc+	£89.00	£104.58
A400 / A5000 10base2 & T Acc+	£99.00	£116.33
A3020 10base2 Access+/ext MAU	£99.00	£116.33
A3020 10baseT Access+/ext MAU	£99.00	£116.33
RiscPC/A7000 10base2 or T Acc+	£89.00	£104.58
RiscPC/A7000 10base2 & T Acc+	£99.00	£116.33
Ant Access+ ROM upgrade	£10.00	£11.75

Cables

2M	£4	£5.29
3M	£6	£7.05
5M	£7	£8.23
10M	£11	£12.93
20M	£15	£17.63

State 10base2 or 10baseT

any size made to order

Premier Quality Ink Refills

Single refills	(1x22ml)	£6.00 inc
Twin refills	(2x22ml)	£10.00 inc
Triple refills	(3x22ml)	£14.00 inc
Tri- Colour	(C,M,Y)	£15.00 inc
Quad-Colour	(C,M,Y,K)	£20.00 inc
125 ml		£21.00 inc
250ml		£38.00 inc
500ml		£50.00 inc
1 litre		£70.00 inc

All sizes available in C,M,Y,K

Network Hubs

	exc Vat	inc Vat
10bT 16+2(18) port	£75.00	(£88.13)
100/10 Auto 16 port	£249.00	(£292 .58)

We supply and / or install all network

RiscPC PC Cards

DX2-66	**£145.00 inc VAT**
DX4-100	£195.00 inc VAT
586-100 (Acorn)	£290.00 inc VAT
586-133 (CJE 512)	**£325.00 inc VAT**

MICE & KEYBOARDS

	Ex. VAT	Inc. VAT
Acorn Trackball/Mouse *NEW*	**£29.79**	**£35.00**
Acorn Original Mouse	£25.00	£29.38
Acorn **ERGO Mouse** *NEW*	£12.00	£14.10
A7000 Logitec Mouse	**£15.00**	**£17.62**
Ergo (std) RiscPC Keyboard	**£21.28**	**£25.00**
Ergo curved RiscPC K/board	**£29.79**	**£35.00**
A400/A5000 replacement k/brd	£69.00	£81.08

ARCSHARE

Acorn networking for PCs

£29.95 exc Vat £35.19 inc Vat

see network section for Cards etc.

NEW DEALS

Acorn C/C++
Special Deal
£125 inc VAT
£106.38 exc

£32.50 inc.

FREE Doom Secrets book ONLY from CTA

Replacement Floppys Drives

A3000/400/500 £29.00+vat (£34.08)

A30X0/4000/5000 floppy allows cross -formatting of HD and DD discs £29.00+vat (£34.08)



Special Winter Offers

Shuggy was £25.95 now	£14.95 inc
T.A.N.K.S. was £25.95	£16.95 inc
RAMplify was £19.95	£17.95 inc
Childplay (desktop)	£14.95 inc



For all 8Mb machines

Only £26.00 INC VAT



Quake £33.00 due now

Character Mouse Mats

Southpark Kenny	£5.99
Southpark Cartman	£5.99
Disney Mickey, Pooh, Donald etc.	£5.99
X-files (four types)	£5.99
Garfield	£4.99
Various novelty	£4.99
Std. mat £1.00 Econ.	£.65

FLOPPY DISKS @20p !!

	Ex. VAT	Inc.VAT
DD Re-label Acorn fmt 10 pk	£2.00	£2.35
DD Re-label Acorn fmt 100 pk	£17.02	£20.00
DD Branded box10 pack	£2.50	£2.94
DD Branded box 10x	£21.28	£25.00
HD bulk Acorn or PC 10 pack	£2.00	£2.35
HD bulk Acorn or PC 100 pack	£17.02	£20.00
HD Branded 10 pack	£3.50	£4.11
20 cap Disk Box	**£1.69**	**£2.00**
40 cap Disk Box	**£2.54**	**£2.98**
100 cap Disk Box	**£2.98**	**£3.50**
3.5" Floppy head cleaners	**£2.50**	**£2.94**
CD-ROM cleaner	**£4.25**	**£4.99**

Switch Boxes

2-1 with cable	£15.00	£17.63
2-1 Auto with cable	£15.00	£17.63
4-1 with cable	£19.00	£22.33
2-1 Monitor / Keyboard	£29.79	£35.00

We can repair/upgrade your machine(s) and monitors at competitive prices please ask
All Acorn's including BBCs & PCs

Printer Ribbons, Inkjet Cartridges, New/Recycled Laser Toner Carts

Prices available on request

NEW STAFF

CTA Direct are looking to recruit new sales, technical and Modern Apprentices. Please send CV to Main Address marked Careers@CTA

(All Prices below include VAT) # THE BARGAIN BASEMENT Most Items will be at Acorn Shows

Acorn Software Bin

A3010 Joystick Controller Software	£15.00
ABUSE	**£24.00**
Acorn Pocket Book..Schedule	£10.00
Alone in the Dark	£29.00
Arm Tech Labeller	£9.00
Art Tech Graphics	
Birds of War	£20.00
Boxing Manager	£8.00
Clipart Packs (various)	£10.00
ColourSep (Colour Separation Software)	£8.00
Creator 2	£25.00
D'File Font Pack (Academy)	£10.00
D'File Font Pack (Balmoral)	£10.00
D'File Font Pack (FreeStyle Script)	£10.00
D'File Font Pack (Manhattan)	£10.00
D'File Font Pack (Mastercard)	£10.00
D'File Font Pack (Old Towne 536)	£12.00
DeskTop Thesaurus	£14.00
Diary +	£9.00
DOOM Trilogy (£32.50 with book)	**£30.00**
Drifter	£30.00
FIRE and ICE	**£15.00**
Font Pack 1 (2 Disc Set)	£10.00
Font Pack 2 (2 Disc Set)	£10.00
FRAK (for RPC and A7000) NEW	**£14.00**
Galactic Dan	£10.00
Game ON (for RPC)	£15.00
Global Effect	£25.00
Guile	£10.00
HERO QUEST	**£15.00**
Imagery Art Package	£25.00
Impression Borders Discs 80 Chinese	£10.00
Impression Borders Discs 80 Old Engl.	£10.00
Jahangir Khan Squash	£8.00
KV (Platform Game)	£8.00
My World Support Disc Ancient Egypt	£12.00
My World Support Disc Ancient Greece	£13.00
Nuclides II and Elements II (save £5.00)	**£25.00**

Acorn Software Bin

Quake (due soon)	**£33.00**
Quest for GOLD	**£5.00**
Revelation 2	£29.00
SilverBall	£10.00
StrongGuard	**£25.00**
Syndicate +	**£26.00**
Swiv (Budget Title)	£9.00
TURBO DRIVER - Epson Stylus	£45.00
Visual Backup	£15.00
Wavelenth	£12.00
World Class Leaderboard (GOLF)	£10.00
Zool (on HD)	£10.00

Acorn CD-ROM Software

Acorn Replay CD (back in Stock)	£5.00
D'File PDCD 1,2,3 or 4	£5.00
D'File PDCD 5	£10.00
Hutchinson Encyclopedia	£39.00
Robert Duncan Cartoon KIT	£39.00
TopicArt CD	**£10.00**
Tots TV ABC	**£19.00**
YITM Electricity and magnetism	**£15.00**
YITM Elements	**£15.00**
YITM Materials	**£15.00**
YITM (all three titles)	**£35.00**

Various Hardware bargains

A3000 bases from	**£85**	**£99.88***
A3010 bases from	**£100**	**£117.50***
A3020 bases from	**£125**	**£146.88***
A4000 bases from	**£150**	**£176.25***
A5000 bases from	**£250**	**£293.75***
RPC bases from	**£468**	**£549.90***
Monitors Various	**POA**	**POA**
Panasonic PD scsi system int	£139.00	£163.33
Panasonic PD scsi system ext	£199.00	£233.83
Pioneer SCSI 4x 6x stack ext	£169.00	£198.58
Syquest 230 EZflyer (parallel)	£85.00	£99.88

1/2 price (or less) Book Bargains

Dabhand Guide "Budget DTP"	£3.00
Dabhand Guide "C" ver 3	£8.50
Dabhand Guide "C" ver 2	£3.00
Dabhand "Graphics on the ARM	£7.50
Dabhand Guide "Impression"	£7.50

CD Education / Multimedia/ Kids Titles for PC

3D Body adventure	£10.00
FUN SCHOOL 5 (dreamland)	£10.00
FUN SCHOOL young scientist	£10.00
GLOBAL FRENCH	£10.00
GCSE maths 97/98 curriculum	£15.00
KIDS CAD	£10.00
Kids Zoo & 3D Dinosaurs	£10.00
MATHS BY COLOURS	£10.00
MS FINE ARTIST	£10.00
SHOW & TELL (inc. free calculator)	£15.00

CD Multimedia /Reference Titles for PC

3D Garden Designer	£15.00
Androute Routerfinder for UK	£10.00
Atlas of Great Britain (Ordinance Survey)	£15.00
HOME GARDENER CD	£10.00
MS BASKET BALL	£10.00
MS BOOKSHELF 94	£8.00
MS CINEMANIA 94	£8.00
MS CINEMANIA 95	£10.00
MS DANGEROUS CREATURES	£15.00
MS ENCARTA 96 OEM	£15.00
MS Encarta 98 Encyclopedia	**£40.00**
MS JULIA CHILDS HOME COOKING	£10.00
MS MUSIC CENTRAL	£10.00
MS Magic School Bus	£15.00
ROUTE 66 (UK and Ireland)	**£15.00**
VISIONS OF MARS CD	£10.00

CD Anglia Multimedia **Reduced to clear**

PC Utilities & Languages (on CD ROM (inc vat)

Incontext Web Analyser	£10.00
Incontext Web Spider	£10.00
LOTUS SMARTSUITE 97 FOR WIN 95	**£25.00**
MICROGRAFIX DESIGNER	£25.00
MS WORKS V2.0 (Win 3.1 or 95)	£10.00
MS WORKS V4.0	£25.00
Photo Album maker	£10.00
Photo Calendar maker	£10.00
TURBO CAD	£15.00

PC CD Business Titles

COREL DRAW V4.0 CD	£20.00

PC CD-ROMS Buy 2 get one free
£5 list being updated please ring or e-mail

PC CD-ROMS Buy 2 get one free
£10 list being updated please ring or e-mail

Alternative PC Bases

Pentium from ONLY £249.00 + ring for latest prices.

HOW TO ORDER

BY MAIL or PHONE: Cheques or P.O.s should be made payable to 'CTA DIRECT'.

CREDIT CARD / SWITCH please give name, address, tel. no, card no, expiry date, issue no. if any.

BY EMAIL: sales@cta.u-net.com

OFFICIAL ORDERS by MAIL or FAX

Carriage charges inc. ins. & packaging charged at cost

Small items (under 2Kg)..........no more than £6 + vat

One box of items totalling upto 25kg............£6 + vat

Computer systems.......................................£12 + vat

All prices are correct going to press. E&OE

All goods are guaranteed but not supplied on approval

news

New Acorn engineering office

Acorn Group plc has announced that Acorn Computers Limited is to set up a new multimedia silicon design facility in Bristol. Acorn has previously set up offices in various different countries and had a small office and showroom in Covent Garden, London, back in the Chris Curry days, but this is the first time that Acorn has set up a design and engineering office in the UK outside of Cambridge. Acorn says it has successfully recruited seven senior design leaders and engineers for the new site, and they will form the initial team operating the new facility. It all seems like Acorn is making a new start in Bristol.

The Bristol office will be fully operational the beginning of February and, according to an Acorn statement, will strongly complement Acorn's existing multimedia silicon architecture, software and system design skills. Acorn's new big idea is to adopt a 'software on silicon' business model for the next generation of multimedia devices.

Simon Knowles, Acorn's new VP Silicon Design, will lead the Bristol facility. Acorn's statement continues by saying that the Bristol team is one of Europe's most highly-regarded expert sub-micron silicon implementation groups, with very strong expertise in microprocessor, analogue, memory, video and EDA tools design.

"We are delighted to have joined forces with this highly skilled team in the pursuit of high-performance, multimedia, silicon designs for next generation digital TV systems," said Stan Boland, Acorn's CEO. "The processing power in or around the TV set is forecast to increase dramatically over the next five years. This is driven by higher resolution streamed TV programming in many parts of the world (HDTV), as well as greater image manipulation and interactivity to drive up operators' revenues. The combination of our architectural and software capability with our new silicon implementation team will allow us to generate integrated licensable intellectual property (IP) to support the consumer electronics market."

The decision to base the new office in Bristol, the best part of 200 miles from Cambridge, is not quite as surprising at it might at first seem. The 'new' design team is, in fact, a well-established set up which started back in the days of Inmos and the Transputer and has, throughout, been based just outside Bristol. The core of the team continued through Inmos' acquisition by SGS Thomson and now finds itself with the Acorn badge to wear for now. There is some irony in this as well, because it was Acorn's ARM processor design with which some credited the eventual downfall of the Transputer.

There is some belief that Cambridge is too saturated with ex-Acorn personnel and that the company is finding it difficult to recruit locally. It's reported that staff turnover is currently high and by moving to the M4 'Silicon corridor', Acorn can distance its new staff from the problems of old in Cambridge. The Bristol team looks like a crucial move to establish Acorn as a serious player in the digital TV world. It's interesting to note that a former senior Acorn boss we recently spoke to said he had little faith in the current company's silicon design and engineering expertise. This sentiment can be borne out by the lateness and reported unreliability of the IOMD2 chip which would have been at the heart of Phoebe. With the recruitment of a fresh new silicon design team, Acorn looks to have done some much-needed work to address this known weakness.

Phoenix news

Because of seasonally-affected scheduling, it has been a good bit less than a month since the deadline for the previous issue of *Acorn User* news. In that time, there has been no concrete progress from the Phoenix steering group and its members. A meeting was held at the beginning of December in Stratford upon Avon once again to discuss proposals to take over RISC OS support and development and Acorn publicly acknowledged it was in discussions with a third party when it announced the setting up of the Bristol-based design office. Much of the latest Stratford meeting was subject to a press embargo as negotiations with Acorn regarding the future of RISC OS were still taking place, so we can't yet bring you some of the more interesting items which were discussed.

However, less press-sensitive matters which did occupy the thirty-plus attendees at SiPlan's offices in Stratford-upon-Avon, included concerns over the future compatibility of RISC OS and future ARM hardware which will, inevitably, abandon support for 26-bit internal operation. RISC OS is inherently 26-bit and there was genuine concern that future Intel and ARM Ltd chip designs could be useless for running the current version of RISC OS. There was no shortage of volunteers to do the necessary work to produce an interim 32-bit version of RISC OS, plus deliver a final pure 32-bit version, but the assembled were warned that the latter goal represented well over a year's work. Before this critical work could even be planned, let alone commenced, access to RISC OS source-code would have to be provided, which just underlines how important the concept of taking over RISC OS support and development is.

Millipede once again talked about their plans to produce a replacement Risc PC motherboard. This time more detail was added, but as they, too are negotiating their deal with Acorn, we are forced to hold the details until a more appropriate time. Nevertheless, we can report that Millipede's proposals went down extremely well at the meeting.

As to Acorn and RISC OS – as we were going to press the steering committee and Acorn were due to meet within a few days and Paul Middleton of Uniqueway, who was voted to head the negotiations with Acorn, told us that he was cautiously optimistic that a deal could be struck.

Hobbyists at Southwest Show

The Acorn Southwest Show, takes place Saturday 20th February 1999 at the 'Webbington Hotel', Loxton, near Axbridge, North Somerset. To reflect a strong hobbyist approach, the organisers have let it be known they would very much like Acorn enthusiasts to play a part on the day of the show and have set aside a special area for this.

The organisers are looking for people or groups providing a non-commercial Acorn related service, or who having something of interest to demonstrate on their Acorn computer. It would be an excellent opportunity to publicise yourself or your group to a large number of Acorn enthusiasts, at no cost to yourself. If you're doing anything unusual with your Acorn computer and you'd like to demonstrate it, please contact John Stonier on tel: 01707 390410. More information about the show can be found at: http://www.argonet.co.uk/acornshow

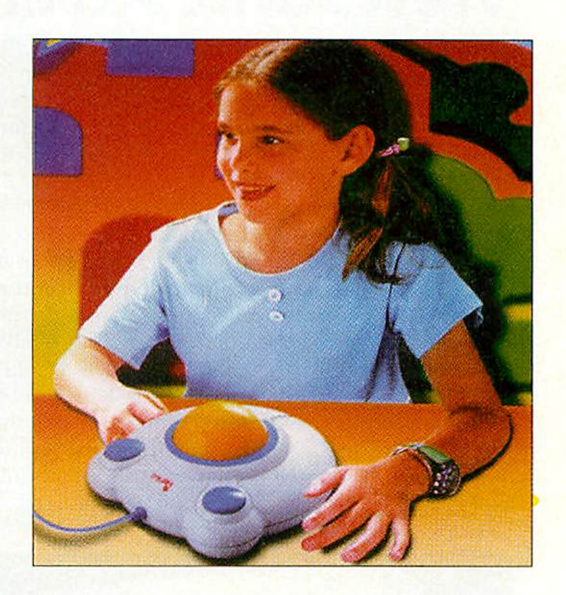


Low cost track ball

The ubiquitous computer mouse was a revolution in computer control when it was invented as far back as the 1960s. Good that it is, not everyone can cope with a conventional mouse. People with special needs, like those with who have co-ordination difficulties or restricted movement, often have problems using an ordinary mouse. SEMERC, the Granada Learning company which specialises in special needs computing, has come up with what's called the Kids Ball, an over-size tracker ball.

The Kids Ball is actually a development from a Genius tracker ball designed for small children. SEMERC have added extra software and produced a switched version for people who can't easily use the standard version's built in buttons. SEMERC's software allows the speed and sensitivity of the tracker ball's motion to be adjusted to suite. The two large buttons can be configured to generate a double-click or a latch and drag command with a single press.

The standard version of the Kids Ball is priced £49 + VAT and the Switch Adapted version is £75 + VAT. The Kids Ball can be used alongside the host computer's original mouse without having to disconnect one before using the other. See the new controller at BETT'99 in the new year. SEMERC, tel: 0161 827 2927, fax: 0161 827 2966, e-mail: margaret.thompson@granadamedia.com

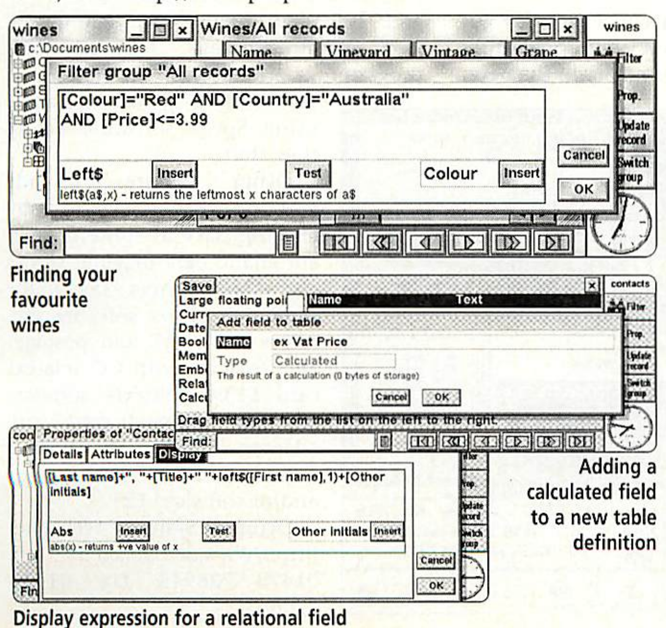


Purple PowerBase

Purple Software has announced PowerBase for the Psion Series 5, a replacement database application for the standard Psion Data application. Purple has done something similar in the past for Acorn Pocket Books and Psion Series 3 models with its Data View Pro product and like this, PowerBase retains compatibility with Psion Data files and all other databases which can support the import and export of text files.

According to Purple, PowerBase incorporates a powerful, yet compact, relational database engine. Features include drag and drop intuitive user interface, an expression evaluator, field types including relational, text, numeric, currency, date and time. There is also the ability to find and sort records on up to three fields using filters, plus there are database templates and printing of all views. An evaluation version of PowerBase is now available on Purple's Web site and a Pro version of the software will be released at the end of Q1 1999.

Purple Software Limited, tel: 0171 387 7777, fax: 0171 387 1188, Web: http://www.purplesoft.com.



Finding your favourite wines

Adding a calculated field to a new table definition

Display expression for a relational field

The non-computer printer

The peripherals industry seems to have it in for computers. Some modems now don't need computers – they have their own memory for taking faxes and voice messages when the host computer is switched off or absent, for example. Now, how about an ink-jet printer which can bypass the computer too? That's the claim of the new Lexmark Jetprinter 5770.

Outwardly looking like the JP5700 which was reviewed earlier this year, the 5770 gives the game away when you spot its two small memory card slots. These slots aren't for extra fonts or to add PostScript compatibility, they're for reading pictures taken on the current generation of digital still cameras. To the lower left of the camera is a LCD display and some control buttons enabling you to select which photo you want to print after inserting your camera's memory card. The printer supports both SmartMedia (the very thin ones with a large SmartCard-like gold contacts on one side) cards and CompactFlash cards.



A third computer-less option for JP 5770 users is connection to an external Iomega Zip drive using a special cable. The JP5770 is an excellent all-round printer, just beaten by the Epson Stylus Photo in our printer tests. It features 1200 dpi printing and swappable black and 'Photo' colour cartridges depending on primary use. At the launch event, Lexmark were joined by Agfa to demonstrate how the latter's camera's worked seamlessly with the former's printers and the results being snapped and handed out on the day were remarkably impressive.

As the filing systems for CF cards and SM cards is practically standardised, most recent cameras using these memory cards should work with the JP 5770, including those from Kodak, Canon, Casio, HP, Fuji, Minolta, Nikon, Olympus, Ricoh and others.

The price is £349 + VAT, which is just about double the price of the standard 5700 printer. Lexmark on the Web: http://www.lexmark.co.uk

ViewSonic Xtreme

This column is being written just a week before Christmas and lucky as I am to have an Acorn AKF85 17 inch monitor – the one originally supplied with my Risc PC – a ViewSonic Xtreme P817 21" monitor would be something of a dream Christmas present. To start with, it has 360MHz of video-input bandwidth and a maximum resolution of 2,048 x 1,536 pixels at a refresh rate of 85Hz. It is also rated to the very latest TCO99 monitor emissions regulations.

The tube has a 0.26mm dot-pitch and an Invar shadow-mask. The display is specially coated with anti-glare layers which refract unwanted reflections. Alas, as-yet unsupported in the Acorn World, there is a 4-port USB (Universal Serial Bus) hub built into the monitor, which would allow the hot-plugging of up to four other USB devices like digital cameras, scanners, etc. Also supplied with the monitor is Windows software for matching the colour display of the screen to printed output. All this for a piffling £1,299. Santa where are you? ViewSonic Europe, Ltd, tel: 01293 643900



Digital camera news

Spacetech has announced that their *PhotoLink* software is now compatible with Olympus' latest C900 ZOOM and C1400-XL Megapixel Camedia digital cameras. Plus, the C1400-L SLR zoom digital camera price has been reduced in price by £200 (all prices include VAT). Spacetech is also selling new accessories for the C1400 range, *Photolink* software for the C-840L has been updated and there is a new dye-sublimation printer for digital cameras and videos.

The C900 ZOOM is priced £649.99 and is a compact form factor camera with a resolution of 1280x960 pixels. It also has a motorised optical zoom as well as a digital Tele mode. This means that the camera provides the user with the 35mm equivalent of 35-105mm continuous optical zoom, supplemented by the digital zoom which provides the equivalent of a maximum equivalent focal length in 35mm terms of 210mm.

The C-1400XL, priced at £999.99, is a speeded up version of the C-1400L. The C1400-L has been reduced to £799.99. The C-1400XL has the same resolution of 1280x1024 pixels but allows quick and continuous shooting even in super high quality mode, up to five frames at 3.3 frames/sec. It has a built-in flash intensity adjuster as well as a connector for an external flash.

New add-on lenses are available for the C1400L and C1400XL. These are a 1.45X tele-conversion lens, a 0.8X wide-conversion lens and a macro conversion lens. A flash film scanner is also available for these cameras which allows negatives or slides to be scanned by the camera.

PhotoLink Software has been enhanced for the C840-L camera. Existing users may get a free upgrade via e-mail on request, or a new disc for a small handling charge.

A new dye sublimation printer for Olympus cameras is now available for £399.99. This is the P330E which has the rather unusual resolution of 306dpi (not 360dpi) with 16M colours. It prints direct from the camera's SmartMedia memory card via an internal slot. It has video output for observing images on a TV and video images may be printed from a TV monitor.

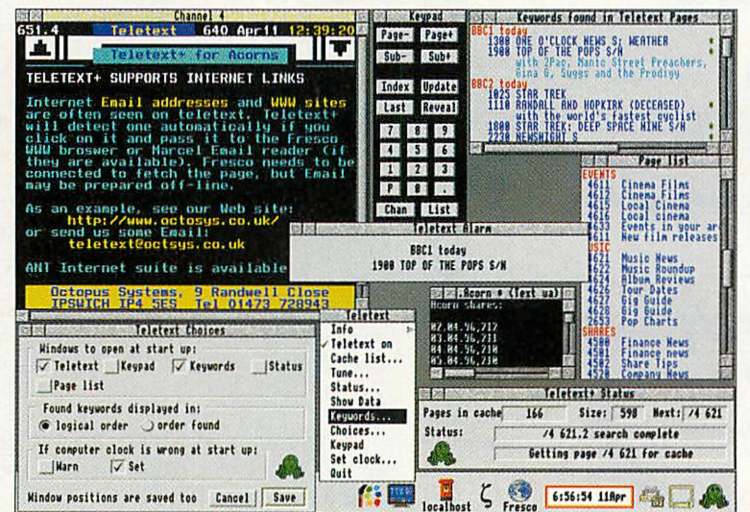
The P300 dye-sub printer, which prints direct from the camera via a cable input has now been halved in price from £499.99 to £249.99.

Spacetech can be contacted tel: 01305 822753, fax: 01305 860483 and http://www.spacetech.co.uk

Teletext+ with Teletext card

Teletext cards with *Teletext+* software are now available at the new reduced price of £139 from Octopus Systems. These are Computer Concepts teletext cards (no longer available from CC) supplied with Octopus' own advanced *Teletext+*. The software displays pages on screen but works much faster than a television as pages and sub-pages are cached for fast access.

Cursor keys can be used to step through the sub-pages and a learning facility means that *Teletext+* always grabs the pages you use the most so you don't have to wait as much as usual. It can also automatically search hundreds of pages every day for keywords that interest you, presenting you with a personal summary of the news and TV listings. It will even search the TV and Radio listings for favourite programmes and keywords and remind you with a spoken message, using Speak software, before they start.



Other features include FastText; page selection by clicking; save as sprite or text; automatic data logging; stocks and share prices saved for Apricote's *Shares* software etc. Prices (inc. VAT and postage) are: *Teletext+* with CC Teletext card £139, *Teletext+* software for other teletext cards and adapters £39, Speak software (when ordered with cards and/or software) £21.

Octopus Systems Web site: http://www.octosys.co.uk/, tel: 01473 728943, fax: 01473 270643.

Showroom open Mon-Sat 10-18.00 hrs (All prices INCLUDE VAT) Carriage not included

RiscOS Computer Systems

1yr warranty (On-Site for A7000's only). **Carriage included on computers.** All machines are single slice. Backplane fitted to 10M/34M RiscPC only.

233MHz StrongARM now fitted to all RiscPC Computers.

Computer Model with	14" (Samsung)	17"(VMastr)	No Monitor
Acorn NC 16MB(10BaseT) with Mse/Keybd	£460	£710	£340
A7000+ NET (10Base2/T Ethernet)	£780	£1040	£670
A7000+ 8MHD1.2Gb	£840	£1090	£720
A7000+ 8MHD2Gb+32CD Peak Performer	£875	N/A	N/A

- The Peak Performer incl. Teko 14" Monitor, Spkrs + one Software Bundle
- Foundation Bundle - StartWrite, Darryl the Dragon, Maths, Gordon's Groovy Granny, TinyArt, Acorn Exploror, King Arthur.
- Extreme Bundle - StartWrite, Resultz, Rhapsody2, Pandora's Box, The Big Picture, Taskforce Clipart CD.

Computer Model with	14" (Samsung)	17"(VMastr)	No Monitor
RiscPC SA233 4MHD1.2+8xCD (SRP21)	£1060	£1310	£940
RiscPC SA233 10MHD1.2+24xCD (SRP26)	£1235	£1485	£1115
RiscPC J233 34MHD1.7+24xCD (SRP41)	£1370	£1620	£1250

RiscPC J233 includes the Acorn J233 Internet software pack comprising !Browse, RisCafe JAVA & OmniClient II
Add £40 to 14" (Samsung) prices for Samsung 15" Monitor instead.
Add £20 to 17" prices for VisionMasterPro instead of VisionMaster

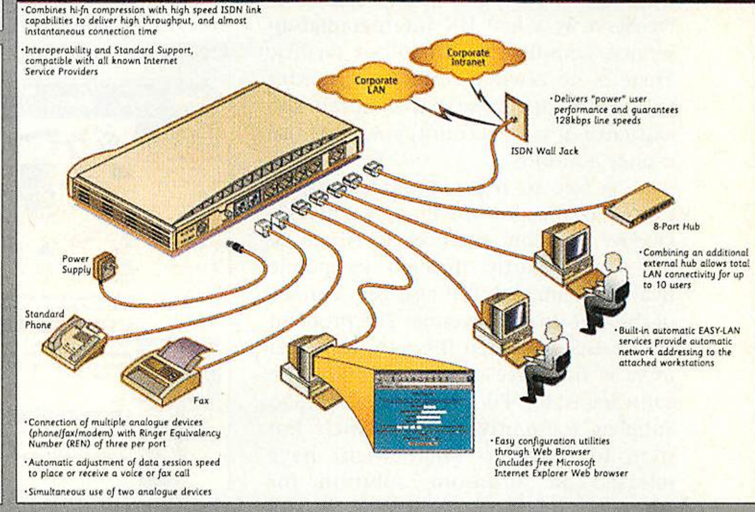
3Com ISDN LAN Modem £335c

Connect up to 4* computers² to the Internet with just ONE single ISDN dial-up³ internet account!

This amazingly easy to use unit is suitable for RiscOS, PC, Mac & Unix computers and compatible with BT ISDN/HomeHighway services. It provides;
- 128kbps Multilink PPP ISDN with compression & PAP/CHAP security.
- A FOUR* port 10BaseT Hub for networking to each computer².
- TWO analogue telephone ports for standard telephones, faxes & modems.
- DHCP Server for automatically configuring computers for the network.
- Built-In Web server for configuration & diagnostics from a conn'd computer¹.
- Built-In DNS server.
- Flash upgradeable for user-installable future firmware upgrades.

Ring us now for further information.

* - Expandable to support up to 10 Computers. ¹ - A JavaScript enabled Web browser is required for access to Web Server. ² - Each connected computer must be equipped with a 10BaseT network card. ³ - ISDN line and ISP account not included.
NOTE - PSU, Network cabling for ONE computer and ISDN Cabling is included with the unit.



New Software Releases Perfect Christmas Gifts

Heroes of Might & Magic II — £32a
- A7000/NC - RiscPC with 8Mb RAM & CD-ROM

DOOM+ Trilogy for RiscOS — £30a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Descent for RiscOS — £27a
- RiscPC with 8Mb RAM & CD-ROM (SA pref'd)

Abuse for RiscPC/A7000 — £22a
- RiscPC 8Mb RAM, 10Mb HD space, VGA

Syndicate+ for RiscOS — £26a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Frak for RiscPC/A7000 — £14a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

Exodus — £19a
- A5000 - RiscPC with 8Mb RAM & CD-ROM

XMAS Opening Times

We will be open as usual over the Xmas period except for the following days; 25th, 26th, 28th, 30th, 31st December & 1st January 1999.

CD-RW & CDBlaze

Yamaha CRW4260t

Recordable & Re-Writeable Internal SCSI CD-ROM drive complete with Cumana's !CDBlaze, cables, CDR & CDRW Disc and PC software. Supports multi-session, MMC, Audio Modes 1 & 2, Write-on-the-Fly

£350b Inc

!CDBlaze (Software Only)	£89a
TDK 650Mb CD-R disc	£2a
TDK 650M CD-R discs (Box10)	£17b
TDK 650Mb CD-RW disc	£18a

Merry Christmas & A Happy New Year to All, especially to our Customers

Monitors (Carriage £10)

Older computers will require an adaptor	£12
Samsung 14" Monitor	**£120**
FST, 0.28" dp, 1024x768, 30-54kHz & pre-sets.	
Samsung 15" Monitor	**£155**
High spec FST Tube with 0.28" dot pitch	
Ilyama VisionMaster 17"	£370
High spec FST Tube with 0.26" dot pitch	
Ily VisionMaster Pro 17"	£390
Very High spec Diamondtron tube, 0.25" stripe	

Memory

Following prices strictly whilst stocks last.

RiscPC/A7000 SIMMS

16Mb	£Calla	32Mb	£Calla
		High clearance add £5	
64Mb	£Calla	128Mb	£Calla

RiscPC VRAM

1Mb 2nd user	£35a	2Mb	£79a

Call for details of memory for other models.

Hard Drives/Interfaces+

Carriage: a=£2, b=£6, c=£8

Hard Drives

Quantum 3.2Gb IDE	£120b
Quantum 6.4 Gb IDE	£160b
Cheetah 4.5Gb SCSI	£520c
10,000rpm Cheetah drives useful for VideoDsk	
Simtec IDE Interface	£55a
Supports up to 4 AT devices including Hard Drives, CD-ROM drives and zip drives. Add £15 for A3000-A4000 version.	
Cumana SCSI II Card	£165b

CD-ROM Drives

Internal CD-ROM Drives

Toshiba 32xCD **ATAPI**	£75c
Toshiba 32x CD **SCSI**	£100c
Cable & Fitting Kit	£10a
Compatible with RiscOS 3.60 or greater.	

External CD-ROM Drives

Panas'c 32xCD **ATAPI**	£135c
Toshiba 32x CD **SCSI**	£160c
External Drives require a suitable Data cable.	

I³ Networking (Carr. £6)

A30X0 EtherLan 102	£130
Archi EtherLan 514	£130
RPC/A7k EtherLan 601	£110
RPC/A7k EtherLan 602	£120

Add £15 to above prices for Access+.

RiscPC Upgrades

RiscOS 3.70 Upgrade	**£63a**
- Above is suitable for RiscPC's only.	
233MHz StrongARM	£275b
586-133 PC Card (512kb)	£Callc
PC Pro v2(without PCExchange)	£38a
Windows '95 CD (Full)	£80a
- Can be installed without any prev OS present	
2nd Slice with PSU	£116c
2nd Slice without PSU	£90c
- Prices of 2nd Slices while stocks last	
YES 16 bit Mozart Card	£70a

Printers (Carriage £8)

Canon BJC-4300	£130
Canon BJC-4650 (A3)	£Call
Epson 440 (720x720dpi)	£139
Epson 640 (1440x720dpi)	£179
Epson 740 (1440x720dpi)	£215
Epson Photo 700 (A4)	£195
Epson Photo EX (A3)	£375
Epson 850 (1440x720dpi)	£270
HP LaserJet 1100 (8ppm)	£285

Zip/Jaz Drives

Include Our JazZip tools
- £10 if purchased separately

Int SCSI zip drive	£115c
Ext SCSI zip drive	£100c
Ext Para zip + 6 Discs	£145c
- add £29 for RiscOS Parallel Driver	
100Mb zip cartridge	£11a
Pk of 6 zip discs+caddy	£55b
Int Jaz 1Gb £220/2Gb	£295c
External 2Gb Jaz	£305c
Jaz cartr. 1Gb £68/2Gb	£73a

Carriage: a = £2, b = £6, c = £8, d = £10

Modems/ISDN (Carr £8)

Budget 56kVoice (Flash)	£75
Pace 56k Voice (Flash)	£135
Pace 56k Solo (Flash)	£190
- The Solo modem can save fax & voice - messages without a computer attached!	
Pace UltraLink ISDN2	£240
ANT Internet Suite II	£110a
Dual Serial Card	£104b
9-25 Archi or PC Wired Modem Cable	£12ea.a
3-way Serial T-Switch (incl. comm. cable)	£32b

Portable Computers

Carriage: a=£2, b=£6, c=£8

Psion 5 8Mb RAM	**£385c**
- includes PsiWin Link	
AutoRoute Express	**£30a**
- one of the best packages for the PB/3a	
PsiRisc	**£67a**

A-Link	£59a		
Parallel Link	£34a	PsiWin PC Link	£80b
3/3a Mains Adap.	£18a	5 Mains Adaptor	£20b

Scanners (Carriage £8)

ScanLight Video 256	£50
- suitable for A3000-A4000 (Only Two left)	

Epson Colour Scanners

Include !TWAIN & ImageMaster for RiscOS. Bundles include software for PC's/PC Cards

GTx-5500 SCSI bundle	£265
GTx-9500 Para bundle	£615
GTx-9500 SCSI bundle	£645

Hardware Upgrades

DMI50 Dual Midi Card	£138b
DMI50XGS Midi/Synth	£335b
Dual Serial Card	£104b
FPA for 25MHz ARM3	£67a
Joystick I/F (Not RiscPC)	£20a
Logitech Mouse (Acorn)	£29a
Midi Max II Card	£95b
Movie Magic (1 only)	£75b
- Includes two VideoCD films	
RiscTV Card (Irlam)	£280b
- with Keying Module (1only)	
RiscTV Teletext option	£40a
Scart Cable (9 or 15 pin)	£12a
Serial Upgrade (A3000)	£27a
100W Stereo Speakers	£20c

Books (No VAT)

Carriage: a=£2, b=£6, c=£8,

Acorn RISCOS3 PRM's	£99.95c
Acorn Volume 5a PRM	£29.75c
Acorn BBC Basic VI Guide	£19.95b
Acorn RiscPC Tech Ref Manual	£49.95c
Budget DTP (Dabs)	£5.00a
'C' A Dabhand Guide (Dabs)	£5.00b
RiscOS 3 First Steps (Dabs)	£5.00a
Wimp Programming for All (Beebug)	£10.95a

CD-ROM Software

RisCafe (JAVA)	**£39.00a**
ArtWorks on CD (CC)	£105b
ClipArt CD 1/2 (CC)	£21a each
Descent (RiscPC 8Mb)	**£28a**
Doom Trilogy (RiscPC only)	**£30a**
Hutchinsons Encyclopedia 92 for RiscOS	£10a
Hutchinsons Encyclopedia 97 for PC only	£5a
Musical Instruments (MS)	£50a
RiscDisc Vol 1, 2 or 3 CD	£12a each
TopicArtCD (DTP)	£5a
TOTS TV CD	£19a
Typography Font CD	£30a
Ultimate Human Body (DK)	£50a

Games (Carriage £2)

Prices below whilst stocks last

Abuse	£22a
Alone in the Dark (Krisalis)	£32a
Birds of War (4D) 2Mb	£25a
B H P (TBA)	£28a
Break 147/Superpool (4D)	£18a
Chocks Compendium (4D)	£18a
Crystal Maze (Sher) Floppy £28 / CD	£28a
Cyber Chess (4D)	£16a
DOOM + Trilogy	**£30a**
Drifter (4D)	£18a
Dungeon (4D)	£18a
Dune II (floppy) (Eclipse)	£27a
E-Type II (4D)	£18a
Fire & Ice (Times Warner)	£23a
Frak	£14a
Heroes of Might & Magic II NEW	**£32a**
Krisalis Collection	£28a
Lotus Turbo Chall2 (Kris)	£26a
Magic Pockets (Reneg)	£22a
Real McCoy 2/3/4/5 (4D)	£18a each
Saloon Cars Deluxe (4D)	£18a
Scrabble (US Gold)	£26a
Simon the Sorcerer 2Mb	£27a
Spobbleoid Fantasy (4D)	£18a
Stunt Racer 2000 (4D)	£18a
Syndicate+	**£26a**
Virtual Golf (4D) 2Mb	£18a
Wolfenstein 3D	**£5a**
- Now compatible with RiscPC+StrongARM	

Printer Consumables

Carriage: £2 for Cartridges, £8 for Toner

BJ-10 (BC-01)	£16	BJ-300 (BJI-642)	£14
BJ-210 (BC-05)	£25	BJC7000 (BJ-60)	£25
BJ-200 (BC-02)	£16	BJC7000 (BJI-61)	£18
BJ-240 (BC-06)	£Call	BJC7000 (BJI-62)	£27
BJC-600 Series			
BJI-201HCbk Black	£9	**BJC-4000 Series**	
BJI-201bk Black	£6	BCI-21Bk Black	£8
BJI-201C/M/Y	£8 ea.	BCI-21C Colour	£15
BJC-800		BC-20 Fast Black	£23
BJI-643 Black	£18	BC-21 Cartridge	£32
BJI-643C/M/Y	£23 ea.	BC-22 Photo Cart	£39
HP DeskJets-500 ser.		**HP DeskJets 600 ser.**	
Mono	£21	Mono	£22
Colour	£23	Colour	£25
Eps Stylus Black	£14	Eps Stylus II Black	£19
Eps Stylus Colour	£23	Eps Stylus II Col'r	£24
Laser Toner		C3903A (LJ5P)	£64
EP-L (LBP-4)	£64	HP92274A (LJ4L)	£54

Applications

ANT Int. Suite	£110a	ArcFax	£31a
ArtWorks (CC)	£104b	Card Shop	£23a
Compression	£31a	DataPower2	£165b
Disc Rescue 2	£43a	DrawWorks Des	£27a
Eureka v3	£105b	FastSpool+	£18a
FireWorkz Pro	£165b	Font FX 6	£30a
HTML Edit 4+	£47a	ImageFS2	£43a
Impression Style	£83b	Impr. Publisher	£136b
MacFS	£105a	MacFS Lite (CC)	£51a
MidiWorks Light	£30a	MovieFS	£29a
Mr Clippy (iSV)	£19a	PC Pro v2	£38a
PC Pro v2 + Exch	£46a	Personal Acc'ts	£45a
PhotoDesk Light	£129b	PsiRisc	£67a
SiteSeer	£Callb	SiteMaster	£24b
Sibelius 7	£?b	SparkFS	£24a
StrongGuard	£24a	Web Design T'kit	£28a
X-Stich2	£28a	Win95FS	£39a

Educational (Carr. £2)

10/10 Series — £14a each

Early Essentials (over 7), English (6-16yrs), French (8-16yrs), Junior Essentials (5-11), Maths (Number) (6-16), Maths (Algebra) (6-16), Maths (Statistics) (6-16), Maths (Geom'y) (6-16), Spelling (over 9), Essential IT, Geog.,

Fun School 3 (under 5, 5-7, or over 7)	£22a
Fun School 4 (under 5, 5-7, or over 7)	£22a
Maths Circus (4Mation)	£28a
Playdays (Gamesware)	£24a
Rosie & JimTwin Pack	£17a
Wizards Revenge	£18a

Terms & Carriage

Carriage: a=£2, b=£6, c=£8

Carriage: To benefit personal callers to our showroom carriage is itemised seperately. The carriage indicated is for single items. Please call us for total carriage when ordering more than one item since it is not cumulative.
Terms: All prices include VAT except books. Carriage is not included unless otherwise stated. Carriage charges apply to mainland UK (excluding remote areas, Scottish Highlands, Chann Isles, IOM), elsewhere at cost. Orders MUST be accompanied by a phone number. Prices and spec's subject to change without notification. Goods subject to availability. Goods not offered on trial basis. Restocking fee on non-faulty returns. Educ Inst official orders accepted. E&OE.

Where to Find Us



Desktop Projects Ltd

Tel: 0161-474 0778
Fax: 0161-474 0781

Unit 2A, Heapriding Business Park, Ford St, **STOCKPORT**, Cheshire. SK3 0BT. www.desktopp.demon.co.uk
Email: info@desktopp.demon.co.uk. Open Mon-Sat 10.00-18.00 hours.

We Accept










Jan 99



Free Internet via Clares

The saying goes, there is no such thing as a free lunch. However, the much-publicised Dixons/Energis-operated FreeServe Internet service does get close. FreeServe is a free UK Internet dial-up service, complete with mailbox facility. There is no obvious 'catch' apart from the fact that if you want to maintain the existence of your account, you must use it once a month.

It is free to register and use, apart from a local call to the Energis network. Dixons probably finances its share of the service partly through its public relations budget, but it also gets a shave of the dial-up call revenue. The problem with FreeServe when it comes to Acorn users is that FreeServe's get-you-online software is for PC users. Clares Micro Supplies (currently of Northwich but soon to move to Middlewich) have released an all-in-one solution for obtaining free internet access to FreeServe, although they do admit it does cost you something to get going.

For just £99.95 plus £6 P&P you get everything you need to get online with FreeServe, including an internal 33.6k modem for your Risc PC together with a CD containing *WebsterXL*, *ArcWeb*, *Socketeer*, *NewsHound*, *NewsBase*, *Messenger* and *SysLog*. Clares does the technical part of registering you with FreeServe for you – all you need to do is phone them with your order.



When your modem and software arrives, you simply follow included instructions to install the hardware and software and then you enter your account details, which are also supplied. You should find a welcoming e-mail from Clares waiting for you.

Naturally, if you already have a modem or you're quite technically minded, the best option is to work out how to register yourself to FreeServe manually, but otherwise, the Clares deal is simple and you really do get a free Internet connection. Clares can be contacted on: 01606 48511.

Cerilica's new web site

Cerilica Ltd, the spin-off from Astute Graphics, which is dedicated to the up-coming *Vantage* drawing package, has now opened its official Web site. The product, Cerilica *Vantage*, is aiming to be the superior successor to Computer Concepts' *Artworks*. As such, the Web site has an important job in keeping prospective buyers and users up to date with its progress as it nears its target launch date this spring. The Cerilica home page is at http://www.cerilica.com/. To contact Cerilica directly, call Nicholas van der Walle on 01989 567350.



TransCalc

Feldner & Braun Software GdbR has announced that they are now distributors for the advanced desktop calculator application, *TransCalc*, produced by Niklaus Weiss. *TransCalc* integrates with the RISC OS drag and drop data exchange, can handle formulae, generate log files, provides a decent calculator window for binary arithmetic, computes in BCD internal data representation to reduce conversion errors and, at least, in the full version, can handle a number range from +/- 10 ^ -4800 to 10 ^ 4800. (That's a 1 with 4800 zeros.) A fully working free demo version of *TransCalc*, with a few of the hip features missing, is available http://www.spektracom.de/ flying-snail/transcalc/

The full version is priced £39, which is a special offer from the recommended price of £49. Feldner & Braun Software GdbR, tel. +49 921 47463, e-mail flying-snail@spektracom.de, Web: http://www.spektracom.de/flying-snail/

Graphics for Sibelius

!SibToDraw is a new object-based graphic program, specially designed to work along with highly successful *Sibelius* music writing package. *!SibToDraw* loads page and text style settings directly from *Sibelius*, importing single pages as well as entire scores, correcting a number of things (rastral size, over-hanging slurs, text hyphens and so on) on the fly, and converting all music symbols into paths automatically.

The program has a *!Draw*-like user interface and includes several powerful editing tools, like flip, skew, rotate, widen, proportional scale and borderise. It is probably the only graphic software which allows user to input slurs, hairpins, music symbols – even entire staves, directly. Text can be typed along any chosen path and text styles can be created and edited as in DTP packages. All editing actions on paths, text and sprites are solid, that is performed in real time, making it an interesting piece of software for non-Sibelius users too.

!SibToDraw is available from Notensatz Freiburg, Germany. There is more information on the Web at http://www.notation.de otherwise, e-mail info@notation.de



Web design for Ovation Pro users

Levens Software has started to ship *HTMLPro*, a utility which can convert *Ovation Pro* DDL files into HTML Web page description files. Ben Levens, who is a professional Web page designer, among other things, realised that *Ovation Pro* would be an ideal Web page designer and so setout to produce *HTMLPro* specifically for *Ovation Pro* users.

The initial release has some limitations – for example Tabs are not yet supported, *Artworks* file support is not yet ready and neither is support for *Ovation Pro*'s Colour Supplement option. However, work is currently being done to correct these omissions.

HTMLPro is really a page conversion program and is limited to enabling links to graphics, so making text links will require some manual coding. *HTMLPro* is priced £40 inc. VAT for a single user, £60 for a primary site licence, £65 for a secondary school and £70 for business use. Postage is £1.50 on top.

For more information, see the Levens Web site at http://www.levens.co.uk or call them on tel: 0500 121 242, e-mail: software@levens.co.uk

The Word is – EasiReader

ArgoNet and Icon Technology came to a consensus on the need for a software product to meet the needs of customers and within three weeks, *EasiReader* was born and shipping.

As ArgoNet's statement goes: "Ian Goodall, MD of ArgoNet, and Mike Glover, MD of Icon Technology, barely had time to meet at the excellent Acorn Midlands Show on the 28th November. They did identify, with help from several show visitors, that there was an urgent need for a low-cost product to enable Acorn computer users to read e-mail attachments created in Microsoft *Word*.

"*EasiReader* has been specially developed to enable Acorn RISC OS users to read and print Microsoft *Word* and Rich Text Format documents. Ideal for opening up Microsoft *Word* documents (Word 6, 7 and documents created by *Office 97/98*) received as an e-mail attachment, *EasiReader* provides the versatility and flexibility increasingly required from Internet communications."

EasiReader joins the family of word processing products developed by Lincolnshire-based Icon Technology. For users requiring the full functionality of a word processor, *EasiWriter Pro* and *TechWriter Pro* both already read and write Microsoft *Word* and HTML documents. Any purchaser of *EasiReader* who subsequently upgrades to *EasiWriter Pro* or *TechWriter Pro* may deduct the cost of *EasiReader*.

EasiReader is available through ArgoNet at £22.99 excluding VAT & carriage (£29.95 including UK carriage and VAT). ArgoNet subscribers are being offered *EasiReader* for a tenner off, including UK carriage and VAT. As well as commissioning this new product, ArgoNet also secured some other subscriber deals on the latest versions of *EasiWriter Pro* and *TechWriter Pro*.

Destiny awaits

Tau Press Ltd, in association with Robert Templeman, are proud to announce the release of his long-awaited 3D shoot-'em-up *Destiny*.



Now available on CD-ROM the game features massive levels of great complexity, built-in sub-games plus the need for strategic solutions, not just shooting to kill.

The game requires 10Mb RAM and has a minimum install size of 13Mb, it will run adequately on an A7000+ or better but is best with a StrongARM.

Use the order form on page 20.

PEP CDFSFiler Beta 6

PEP Associates have released the latest beta of its CDFSFiler drop-in replacement for Acorn's CDFSFiler. It adds to the original functionality by including a sophisticated audio disc player, with the ability to enter track titles and specify play-lists. It also includes cache technology to enhance the retrieval of CD-ROM data. PEP Associates report that they have fixed all of the bugs that have been reported to them since the Beta 5 release.

However, PEP Associates are refreshingly open in admitting that Beta 6 still suffers from occasional lock up problems with certain combinations of hardware. Naturally, PEP Associates are very keen to hear from anyone with such problems. The PEP Associates Web site is at http://www.pep-assoc.co.uk/

New from Sherston

There are two new releases from Sherston Software this month: an updated version of their adventure into control technology, *Mission: Control*, and an updated version of *Crystal Rain Forest* – a '2000' edition. The former introduces the tricky subject of control technology in an original and motivating way and without the requirement for any external control technology equipment. In the adventure children are faced with a series of challenges and problems they have to solve as they strive to save the planet Oglo from destruction.

The problems cleverly introduce and develop the concept of control technology, from creating, testing, modifying and storing sequences of instructions to controlling events using simulated motors, lights, lifting machines. As the adventure develops they progress to using simulated systems that respond to data from sensors. *Mission: Control* is available on triple format CD-ROM (Windows, Mac and Acorn) priced £44.95 + VAT for a single user.

Sherston, tel: 01666 843200, fax: 01666 843216, e-mail: info@sherston.co.uk

Acknowledgement

We forgot to include an acknowledgement to Matthew Cook who took the photos of the Midlands Show that we used in the January issue. Thank you, Matthew.

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: news@acornuser.com



CASTLE TECHNOLOGY

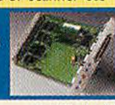
FOR ALL YOUR ACORN HARDWARE & PERIPHERALS



INTERFACES

25% off when bought with drive or scanner etc

CT's Storm SCSI interface offers unbeatable performance. Using 15MB/s SCSI components and our ultra-reliable SCSI FS, Storm's a guaranteed winner.



	Ex VAT	Inc VAT
A30x0 IDE interface kit - 2.5" hard drive	£52	£61.10
A3020 fixing kit - 2.5" hard drive	£8	£9.40
A3/400 IDE interface for 2.5" & 3.5" h.d.	£60	£70.50
Storm8 SCSI2 interface - A30x0 A4000	£88	£103.40
Storm16 SCSI2 i/f - A300/A400 A5/7000	£96	£112.80
StormDMA32 SCSI2 i/f RPC	£128	£150.40
Storm16 SCSI2/10BaseT Ethernet i/f	£148	£173.90
Storm16 SCSI2/10BaseT&2 Ethernet i/f	£196	£230.30

HARD DRIVES (BARE)

170MB A3000/A3010 interface included	£95	£111.63
170MB A3020 fitting kit included	£59	£69.33
170MB A300/A400 interface included	£100	£117.50
500MB A3000/A3010 interface included	£128	£150.40
500MB A3020 fitting kit included	£89	£104.58
500MB A300/A400 interface included	£134	£157.45
210MB 3.5" IDE for A4000 & A5000	£45	£52.88
500MB 3.5" IDE for A4000 & A5000	£59	£69.33
1.2GB 3.5" IDE for RiscPC & A7000/+	£69	£81.08
2GB 3.5" IDE for RiscPC & A7000/+	£80	£94.00
4GB 3.5" IDE for RiscPC & A7000/+	£99	£116.33
100MB 3.5" SCSI	£39	£45.83
500MB 3.5" SCSI	£65	£76.38
2GB 3.5" SCSI	£115	£135.13
4GB 3.5" SCSI	£149	£175.08
6GB 3.5" SCSI	£239	£280.83

EXTERNAL SCSI CASES

for hard drives CD drives & removeable drives
FREE headphones and data cable worth over £20

The unique Combo Case - takes any two SCSI devices & gets rid of all those cables, mains leads etc. Accepts any 5.25 unit.



Acorn M E U 2x CD + free 5.25" slot	£69	£81.08
Case for single SCSI device	£40	£47.00
Combo case for 2 SCSI devices	£60	£70.50

SCANNERS

inc FREE software worth £49

The new ultra-slim ScanExpress 36-bit colour scanner has a compact footprint, fast scanning speeds and quiet operation. Free ImageMaster software and TWAIN driver. Free PC interface/software kit (SCSI only). Optional transparency adaptor available.



ScanExpress 6000 parallel	£99	£116.33
ScanExpress 6000 SCSI	£119	£139.83
ScanExpress 12000 SCSI	£169	£198.58
Scanflat 1200 pro SCSI	£399	£468.83
ImageMaster & Twain	£49	£57.58
Scanflat transparency kit - slides etc	£149	£175.08
ScanExpress transparency kit-slides etc	£75	£88.13
CanoScan 2700F film scanner	£499	£586.33

FIXING KITS, CABLES etc

Podule case for A3000	£16	£18.80
Fixing kits for hard drives	£8	£9.40
A4 IDE hard drive fixing kit	£12	£14.10
A300 series backplane (4 way 4 layer)	£48	£56.40
A7000/+ 1 slot backplane (not with CD)	£34	£39.95
Risc PC 2 slot backplane	£30	£35.25
2nd slice for Risc PC inc 105watt PSU	£99	£116.33
2nd slice for Risc PC	£76	£89.30
SCSI I & II cables choice from	£10	£11.75
SCSI/IDE ribbon cables from	£5	£5.88
SCSI terminator/adaptors (selection)	£10	£11.75
Monitor cable for all Acorn (selection)	£10	£11.75

FREEFAX 0800 783 9638

XTRA HARD DRIVES

Guaranteed 4MB+/sec read transfer rate with Castle Storm DMA32 SCSI card

4GB XTRA 3.5" SCSI	£179	£210.33
8GB XTRA 3.5" SCSI	£329	£386.58
18GB XTRA 3.5" SCSI	£599	£703.83

VIDEO HARD DRIVES

Fastest on market - externally boxed and ideal for Video use - Storm DMA32 card recommended

4GB Video SCSI external	£349	£410.08
9GB Video SCSI external	£599	£703.83
18GB Video SCSI external	£899	£1056.33

CD ROM DRIVES

inc FREE driver software & fixing kit worth £29

Castle Technology's range of CD ROM drives are chosen for their reliability, ease of use and robustness. They have fast access times, and include driver software. They are particularly suitable for multimedia applications.



4x speed SCSI CD ROM drive	£29	£34.08
8x speed SCSI CD ROM drive	£34	£39.95
32x speed SCSI CD ROM drive	£69	£81.08
24x speed IDE CD ROM drive	£45	£52.88
32x speed IDE CD ROM drive	£49	£57.58
IDE CD driver for Risc PC & A7000	£25	£29.38
6x4x2 CD int ReWriter inc !CDBurn	£285	£334.88
6x4x2 Ext CD ReWriter inc !CDBurn	£335	£393.63
16x4x4 CD int ReWriter inc !CDBurn	£349	£410.08
16x4x4 Ext CD ReWriter inc !CDBurn	£399	£468.83
CD ROM fixing kit (data & audio cable)	£4	£4.70

CD TOWERS

7 SCSI CD towers with lockable doors

Add the Castle Technology CD Tower to your network and have simultaneous access to between 7 & 28 CD-ROMs. Enables CD resource discs to remain locked and untouched but accessible from all over the network. Up to 4 towers can be connected to one computer. Fully compatible with Access CD network software.



8x CD 7 drive Tower	£379	£445.33
32x CD 7 drive Tower	£579	£680.33

SPECIAL OFFER!

128K ISDN MODEMS

Join the digital revolution at lightning fast speeds! Using a Castle Technology ISDN modem (connected to an Integrated Services Digital Network pair of lines from BT), you can take advantage of fast Web browsing, fast data transfer, fast faxing, and a hi-performance phone line – all from one hi-tech box! Choose from four network/stand-alone models at great prices!



KEYBOARDS MICE ETC

Ergo keyboard for pre Risc PC	£69	£81.08
Ergo keyboard for Risc PC A7000/+ N/C	£39	£45.83
Keyboard for Risc PC A7000/+ N/C	£19	£22.33
Keyboard cable (6 way)	£10	£11.75
Mouse for all Acorns (not A7000 etc)	£12	£14.10
Mouse for A7000/+ N/C	£15	£17.63
Mouse balls heavy (pack of 10)	£15	£17.63
Floppy drive any Acorn except A300 A4	£30	£35.25
Replacement floppy drive for A4	£79	£92.83

PHONE 01728 621222

REMOVABLE DRIVES

- free media with all drives

For flexible, expandable storage, the infinite capacity of a removable drive is perfect. All drives are the latest spec, and internal versions can be fitted into the CT Combo case. Data transfer rate up to 8.8MB/sec (Nomai).



ZIP drive internal 100MB SCSI	£99	£116.33
ZIP drive external 100MB SCSI	£99	£116.33
ZIP drive external parallel not A300 etc	£109	£128.08
Iomega Parallel ZIP driver (100MB)	£25	£29.38
MaxIT internal 500MB SCSI drive	£129	£151.58
JAZ1GB internal SCSI drive	£189	£222.08
JAZ 1GB external SCSI drive	£219	£257.33
SyJet internal 1.5GB SCSI drive	£219	£257.33
SyJet external 1.5GB SCSI drive	£255	£299.63
JAZ 2GB internal SCSI drive	£259	£304.33
JAZ 2GB external SCSI drive	£279	£327.83
PD 24x CD & 630MB optical SCSI drive	£249	£292.58

MEMORY

A300 & A400 1-4MB	£75	£88.13
A300 & A400 4-8MB	£119	£139.83
A3000 1-4MB	£55	£64.63
A3000 4-8MB	£149	£175.08
A3000 serial port upgrade	£25	£29.38
A3010 1-2MB	£25	£29.38
A3010 1-4MB	£59	£69.33
A3020 & A4000 2-4MB	£35	£41.13
A5000 2-4MB	£60	£70.50
A5000 4-8MB	£139	£163.33
16MB SIMM - Risc PC A7000/+	CALL	CALL
32MB SIMM - Risc PC A7000/+	CALL	CALL
64MB SIMM - Risc PC A7000/+	CALL	CALL
128MB SIMM - Risc PC A7000/+	CALL	CALL
Risc PC 2MB VRAM	£75	£88.13

NEW NEW NEW!!

BJC 7000 – THE ULTIMATE COLOUR BUBBLE-JET PRINTER FROM CANON

This 4-colour bi-directional printer has a resolution of 1200x600dpi, and can print up to 4.5 ppm on paper up to A4+ size (so you can print right to the edge of A4) Choose from Canon's special hi-resolution papers & optional Photo Cartridge for Super PhotoReal quality prints. For sheer quality and durability, this has to be the one!



Special price only **£189** £222.08 inc VAT

PROCESSORS & RISC OS

Risc OS 3.11 chip set	£25	£29.38
Risc OS 3.11 manual set	£20	£23.50
Risc OS 3.11 hardware upgrade - A300	£20	£23.50
ARM 610 processor (2nd user)	£69	£81.08
ARM 3 processor for A3000 A300 A400	£99	£116.33

MODEMS

All modems are external and come with FREE on-line time

56k modem	£59	£69.33
128k ISDN modem	£99	£116.33
128k ISDN + 2 analogue phone ports	£109	£128.08
128k ISDN hub router with 10BaseT	£249	£292.58
128k ISDN modem router (managed)	£385	£452.38

DELIVERY CHARGES - Next day insured

Orders over £200 paid by debit card	FREE	FREE
Small items	£6	£7.05
All other orders	£11	£12.93
Fitting charge (inc collection)	£18	£21.15

We welcome payment by cheque (allow 5 days to clear), Credit and Debit cards.

EDUCATIONAL ORDERS WELCOMED.

CASTLE TECHNOLOGY, Ore Trading Estate
Woodbridge Road, Framlingham, Suffolk IP13 9LL
TEL: 01728 621222 FAX: 0800 783 9638

FREEFAX 0800 783 9638

COMBOS (HD & CD)

Full range available - free fitting in combo case when all purchased at the same time

8x CD & 100MB HD - external SCSI	£130	£152.75
8x CD & 500MB HD - external SCSI	£150	£176.25

REMOVABLE MEDIA

Zip 100MB media	£8	£9.40
Zip 100MB media (6 pack)	£45	£52.88
Syquest 105MB media	£29	£34.08
Syquest 135MB media	£21	£24.68
Syquest 230MB media	£19	£22.33
Syquest 270MB media	£32	£37.60
MaxIT 500MB media	£29	£34.08
Nomai 750MB media	£38	£44.65
JAZ 1GB media	£58	£68.15
SyJet 1.5GB media	£55	£64.63
JAZ 2GB media	£79	£92.83
PD 630MB media	£18	£21.15
CD 630MB write once media (Pk of 10)	£12	£14.10
CD 630MB re-write media	£12	£14.10

COLOUR MONITORS

3 year warranty on all monitors (1 year on AKF18)

The latest developments in TFT screen technology bring the ProLite 36 space-saving flat screens from Iiyama. The 14.1" screen has a viewable area almost 17" and a maximum resolution 1024x768. It is ecologically advanced with low power consumption and reduced eye strain. Suitable for schools or business.





AKF18 14" grade B - pre RiscPC"	£79	£92.83
14" SVGA	£89	£104.58
15" digital SVGA	£110	£129.25
17" digital SVGA	£200	£235.00
15" digital SVGA Iiyama	£159	£186.83
17" digital SVGA Pro 0.25 Iiyama	£340	£399.50
21" digital SVGA Iiyama	£729	£856.58
14" colour LCD display (TFT Analogue)	£599	£703.83

INKJET PRINTERS

inc FREE data cable & Acorn driver WORTH £20

Advanced inkjet technology for bright colour images & fast printing times. Up to 1200dpi resolution (virtual photographic quality). Supplied with Acorn drivers & data cables.



CANON BJC-250	£84	£98.70
CANON BJC-4300	£105	£123.38
CANON BJC-4650	£227	£266.73
CANON BJC-7000	£189	£222.08
EPSON Stylus colour 440	£115	£135.13
EPSON Stylus colour 640	£149	£175.08
EPSON Stylus colour 850	£219	£257.33
Parallel printer cable	£10	£11.75
Turbo driver for above printers	£45	£52.88
Acorn printer driver for any listed printer	£10	£11.75
TCP/IP (LPR) postscript printer driver	£175	£205.63

SPECIALS

DOA warranty only

JP150 sheet feeder	£10	£11.75
Master 128 motherboard	£10	£11.75
German keyboards RiscPC/A7000 etc	£10	£11.75
A5000 Power Supply Unit	£15	£17.63
SJ Econet Bridge	£20	£23.50
Acorn Econet interface	£5	£5.88
SJ Econet starter kit	£20	£23.50
PC card for A3000 A3010 A3020 A4000	£99	£116.33
Startwrite wordprocessor	£5	£5.88

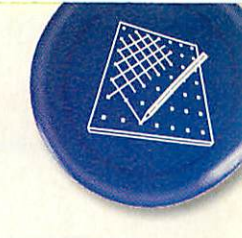
Sales lines open Monday to Friday 9.00am till 5.00pm
Saturday 9.00am till 1.00pm

Contact us by e-mail: sales@castle-technology.co.uk
Visit our web site! http://www.castle-technology.co.uk

All trademarks acknowledged.
E&OE.
All products carry a full 1 year warranty unless otherwise stated.



PHONE 01728 621222



Accessorising Photodesk

Hot on the heels of Spacetech's release of version 3 of the excellent bitmap graphics package, *Photodesk*, the team have released an accessory CD as part of the continued development and support of their product range. The disc features tutorials, example images, textures and software patches. But the big question to ask... is it worth the £24.95 price tag?

Much of the key content of the CD revolves around tutorial material for a wide range of end users. Everything from beginner worksheets for education use to in depth photo restoration is included. CD-ROM is an excellent medium for this material which allows pretty hefty but eminently useful example images to be included. But frankly the need for such material in the first place is slightly questionable. For me the quality of *Photodesk* is in its ease of use, and there was little that I found in the tutorials that I hadn't discovered for myself by trial and error use.

Example work produced in *Photodesk* fills a large portion of the disc and is a accompanied by digital camera material and a range of source textures. But personally these did not prove especially useful. With Spacetech's strong showing in digital camera support, I was expecting a *Photodesk Accessory CD* to be stacked with copyright-free textures and source images but I was disappointed.

Rounding off the CD's content is a range of utilities and updates for *Photodesk*, but unfortunately there's nothing here that isn't available elsewhere – or at least should be available for free.

I'm very reluctant to criticise this release from Spacetech which some will find a valuable resource, but I was expecting much more from the people who've brought us such a great product in *Photodesk*. Remember though, that if you are planning to make a purchase, ensure first that you have a reasonably fast CD drive. Browsing the disc at anything under 8 speed is very frustrating. The *Photodesk Accessory CD* is available for £25.95 and in a slightly alienating move to existing users, comes free with new copies of *Photodesk Light*, *Photodesk 2* and *Photodesk 3*.

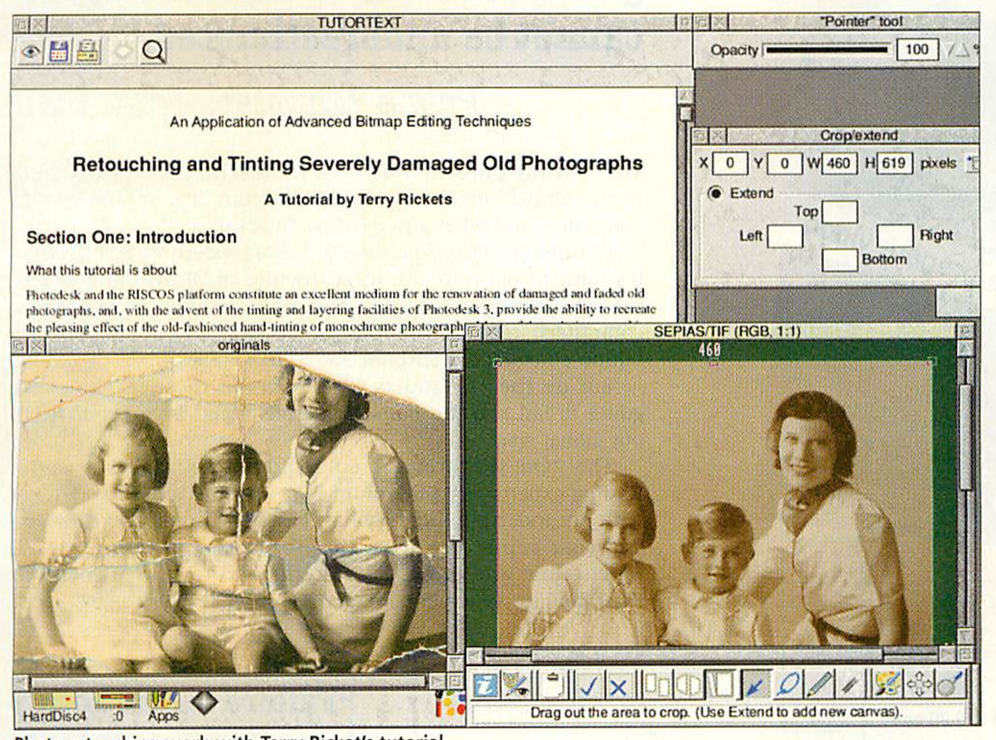


Photo retouching work with Terry Ricket's tutorial

Vantage

As reported last month, rapid development of Cerilica's amazing *Vantage* vector drawing program is now in the beta phase, with a select group of Acorn user's and developers testing and providing feedback on Cerilica's new flagship product. By the time you read this, the package should be nearing completion. Check out the freshly updated Cerilica web site for the latest details.

http://www.cerilica.com/
01989 567350

Graphics page news

Following changes on the Graphics page, there has been some confusion over the format and regularity of the page, which I'll endeavour to clear up once and for all. Firstly, the Graphics page is back in print every month after a brief period of only appearing bi-monthly. The Graphics scene is very important and *Acorn User* is 100% committed to coverage of the latest important developments in this area.

Secondly, during these months the Picture of the Month feature has become somewhat irregular and reader support has dwindled. I'd very much like to resume the feature and would encourage budding Acorn artists out there to contact me with details of their work. Everyone is in with a chance of winning the excellent monthly prize.

Evolution

This month's Evolution demo competition is a strong indicator of the power of current StrongARM Risc PCs, despite their age and the market's desperation for a new faster machine. In graphics terms, we're only just beginning to push StrongARMed machines to their limits, never mind make use of anything faster. Yes, we are somewhat hamstrung through lack of graphics hardware support but the longer term future is brighter than many post-Acorn-bombshell doubters would have you believe...

Connectivity

Interconnex have announced support for the new VDC300 Mustek digital camera which captures images at 640x480 resolution, in three different quality levels and costs £199.95 (inc VAT). Support on RISC OS is provided by Interconnex's *Iris* application which allows the user to browse the camera images as thumbnails and perform simple image manipulation. It's a good sign to see the latest imaging products receiving up-to-date support for our OS.

http://www.interconnex.co.uk/
01934 522880

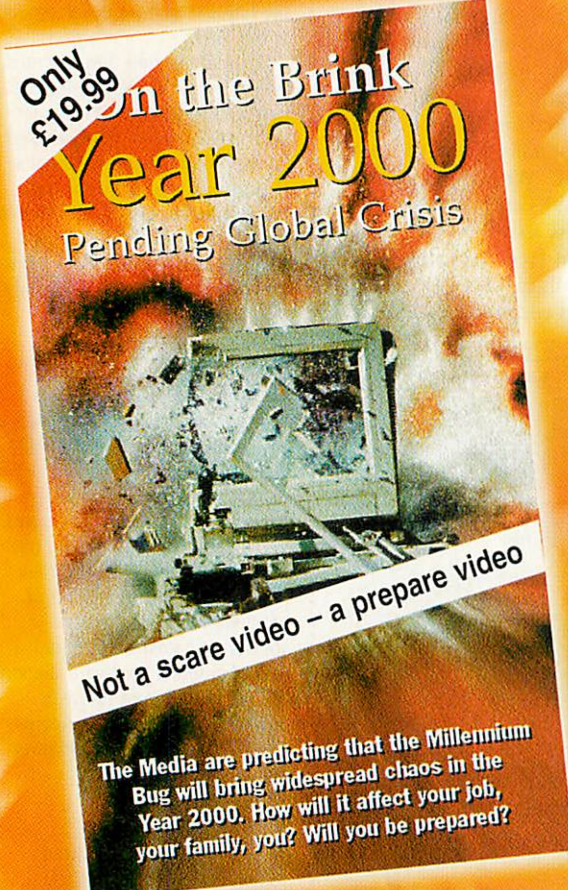
Contacting me

You can contact the Graphics page by writing to me, Paul Wheatley, at Acorn User, Tau Press, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to graphics@acornuser.com

On the brink...

Millennium Bug

Pending Global Crisis



"The Millennium Bug is one of the most serious problems facing not only British business, but the global economy today. Its impact cannot be underestimated."

Prime Minister, Tony Blair

The "On the brink..." video is a non-technical explanation of the potential impact of the Millennium Bug in the world's computers and what you need to do about it.

Computers have been used to make modern society livable – it's hard to see how the infrastructure of the world could be managed without the hundreds of thousands of mainframe computers, tens of millions of desktop machines and two billion embedded microprocessors.

But on the 1st January 2000 some of those machines are going to fail and the potential results could be worse than all out global war.

The "On the brink..." 60 minute video features world-leading experts on Millennium Bug solutions and provides you with an understanding of what may be to come and how you and your family can avoid the worst. And it's a video you'll watch again and again, and recommend to your friends and their families so you'll be prepared for what may come.

ORDER FORM

☐ YES! Please send me ____ copies of the "On the Brink" Video at £19.99 each

☐ Add £1 P&P per video if ordering from the UK
☐ Add £1.50 P&P per video if ordering from Europe
☐ Add £3 P&P per video from Outside Europe

Value of order £__________

Name..
Address..
....
....
....
Postcode..
E-mail..

I wish to pay by:
☐ Cheque/postal order (payable to Tau Press Ltd)
☐ Credit Card (Visa/Barclaycard/Mastercard/Access)

Send your order to:
"On the Brink" Video Offer,
Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP.

Credit Card No: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry Date: ☐ / ☐

AU9902

☐ Please tick here if you do not wish to receive promotional information from other companies

"Failure to deal with the problem could lead to commercial collapse. I put it bluntly because I want to get the message across. It will not respect national frontiers. Unless we act now, there will be international chaos."

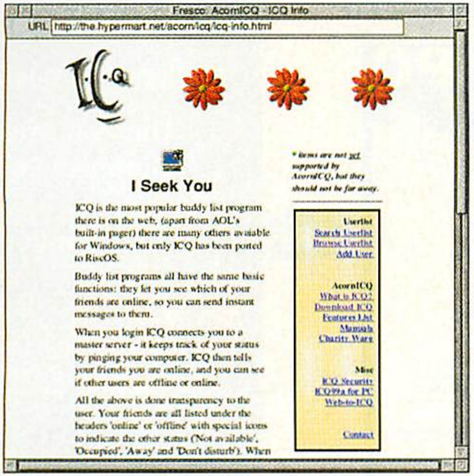
Lord Sainsbury, Under-secretary for Science



Acorn, I Seek You

ICQ is an Internet messaging system that keeps you in contact with friends and associates in real time. The full specification allows for instant-response chat, messaging, file transfer and even peer-to-peer conferencing applications. The *ICQ* Server network was founded in July 1996 by four young Israeli computer users who realised that millions of people using the Internet were connected, but not to each other. They started a software company called *Mirabilis*.

Since then *ICQ* membership and activity has burgeoned and *Mirabilis* has been taken over by *America Online*. The company now reports 530,000 concurrent subscribers. *ICQ* can tell you when your friends are online, and lets you chat and exchange messages with them instantly.



Aye, seek you this site for AcornICQ

Unlike Internet Relay Chat, you choose whom you want to contact and how large or small is your circle of *ICQ* friends.

Although *ICQ* software is a finished product for *Windows95/NT* PCs, Mac and other machines, the Acorn version has been created entirely from the published specifications and is still in development by its author, Angelo Melis. *AcornICQ* is Charityware and Angelo encourages users to donate 25 Guilders or equivalent (about £8.50) to the *Dutch ME Fund* supporting ME and Chronic Fatigue Syndrome patients.

Having downloaded *AcornICQ* and its manual from the support site at http://www.geocities.com/SiliconValley/Hills/5544/ you start the application while you're online to the Internet. If you haven't already received your Universal Internet Number (UIN) from *Mirabilis*, the program leads you through online registration. An existing user's UIN retrieves details automatically from the remote server.

The main window lists the nicknames of other users you're in contact with, which you set up online by entering their UINs. These can be found from search engines on the *Mirabilis* site or on the *AcornICQ* site at http://the.hypermart.net/acorn/icq/download.html. There are over 200 Acorn users on the Acorn *ICQ* register. When you receive a message from a friend, an envelope appears against the name, and you click on it to read and reply to it.

Arriving messages are accompanied by a little Teletubby-like voice that says "uh-oh". I guess *AcornICQ* knows that you're going to spend a long time online enjoying ICQ.

Mail start

Some seasoned travellers who depend on e-mail make sure they use a service provider with global access points so that they can dial up for their mail wherever they are. An interesting alternative is provided by *MailStart.Com* who offer a free Web-based e-mail read and write service for POP3 mail accounts. All you need is Web access from anywhere in the world to enter your e-mail address and password into a form on their front page, and your mail server is contacted.

Your mailbox contents are shown in tabular form so you can read, reply to, forward, delete and send new e-mail just as if you were using your own home mailreader. The information supplied is encrypted as soon as your details are received by *MailStart.Com*, and does not re-appear in HTML nor is stored anywhere on their system. It might be left in proxy servers on the way though, so this needs to be considered. Visit http://www.mailstart.com/ to try it.

Messages on the Move

The Short Message Service (SMS) allows mobile phone users to send and receive short text messages of up to 160 characters to other mobile phone and pager users. It's very fiddly entering a message on a phone keypad, so it's much easier to use a PC and keyboard to compose and send SMS messages via a modem. *!SendSMS* by Steve Smale allows Acorn 32-bit machines to send SMS messages to Orange mobile phone and Hutchinson Telecom pager subscribers.

!SendSMS presents a small window into which you type the phone or pager number of the subscriber. You can also choose from an editable telephone directory of name and number pairs. Up to 160 characters of message text can be entered before clicking on the send button. Your modem dials the Orange SMS service centre and sends the message. A future version of *!SendSMS* will serve Cellnet subscribers too. You can download *!SendSMS* from Arcade BBS on 0181 654 2212 or from Steve's Web site at http://www.steve.smale.com

Send SMS
Phone No: 07970672480
Message: Hello Steve! Read Acorn User!
Clear | Send
© Steve Smale 1998 - www.stevesmale.com
Modem
Driver: IIDual Port: 1
Init Str: ATH

Some good advice for Mr. Smale

Not to be mist

Computing and pot-holing are among the varied interests of the enigmatic Foggy, whose smart Web site contains resources for Acorn users. FAQ (Frequently Asked Questions) pages explain what the Internet is, how to use ArgoNet's *Voyager* software suite for Acorns, and help out Windows PC users. Acorn-to-PC Networking is explained in a step-by-step guide to installing a mixed platform network using Foggy's own Fognet network as an illustration. There's a useful collection of Acorn Monitor Definition Files for download and a section on creating Web pages. Foggy's real name remains a mystery.

Foggy's Homepage
http://www.foggy.co.uk/
http://www.argonet.co.uk/foggy/

Count me in

Go to Jonathan Murray's *Hypermart* to register for your free Acorn Web site hit counter. It's an understated minimalist design, but when clicked on leads to charts and statistics about visitors to your site. The Acorn Counter is associated with Jonathan's *Acorn Banner Exchange* system, where you agree to display the ABE banner on your site. It will contain an advertisement for another member or for *Acorn Banner Exchange* or from a paying advertiser. In exchange, you supply your own banner which will advertise your pages on other members' sites.

Acorn Banner Exchange/Counter
http://the.hypermart.net/acorn/counter/

Spuddy will survive!

Spuddy, the free e-mail, news and unix shell server operated by Stephen Harris, has been rescued at the brink of closure by prompt response from its faithful users. Stephen has e-mailed me to say "People have liked Spuddy enough that they have donated money so I can afford two new phone lines when I move house." It's gratifying to find that there is still a demand for the added value that only enthusiasts can offer. I'll keep you posted on the new number.

Call Spud the Cat on 01268 515441 (number may change)
Web: http://www.spuddy.org/

Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212.



Evolution inside

Finally the Evolution demo competition which began life last year as Revelation is here! Despite many set backs this special issue of *Acorn User* marks the beginning of a new era in Acorn demo competitions. However, it's certainly been a long journey from those initial plans way back at the start of 1997.

Show organiser John Stonier was very keen on making the first Acorn South East show a user event that catered for all of the Acorn scene. John had always been interested in demos and was a regular beta tester of much of the graphical code I was writing at the time. From this position it wasn't long before the idea of a demo party that would take place at the show, emerged. From these early discussions John and myself organised Revelation 97. The event was a great success among UK teams and incorporated a music competition that also saw entries of a very high standard.

Wishing to repeat the scene success of '97, John and myself set about organising an even bigger and better competition for '98. The key aims of the competitions were to raise demo awareness and encourage new teams to enter the demo scene while keeping the events completely non-profit making. Taking Acorn on board as a sponsor, John negotiated with Acorn to secure a competition stand at the Acorn World show and the prize of a Phoebe for the winning demo entry. Unfortunately the cancellation of both venue and prize dealt Revelation 98 a severe blow. A completely different way forward had to be found.

Unsure of where to go next, we decided to get all the demo teams talking and from that forum work out a plan for the competition. An initial e-mail to the demo crews involved, sparked off a long running discussion. The critical Acorn situation had left many users in a very pessimistic position on the future of the scene. We were determined not to give up but instead use the competition as an opportunity to demonstrate the power of the Risc PC.

While wanting to make as big an impact as possible with the competition, we were reluctant to hurriedly move the competition to a different show. The solution was to hold the competition across the Internet and the Acorn press via *Acorn User*. The result was a completely new competition that evolved from the ashes of Revelation, and as you can see from the quality of the demo entries on the cover CD, it's been a great success.

Discussions are already underway for next year's competition. The only problem with events like Evolution is that they hold up all demo releases till the date of the competition. A proposed solution is a form of demo "Oscars" where all releases throughout the year are entitled to enter the competition. Voting is then carried out at the end of the year. If you'd like to get involved, put forward your views or start off on the demo scene, please get in touch with me at the address at the bottom of this page.



Screenshots from the Nutters winning entry for Revelation, last year

QTM again

Since the original releases of the QTM music player on the *Acorn User* cover disk, updates have been relatively minor as far as the general user is concerned, and a major update has not occurred despite the promise of the QTMeditor. As author Stephen Harrison describes "Both the QTM module and the *QTMEditor* module have been approaching completion over the last year, however with pressure of my final year project and exams, I have had very little time to test and finalise the programs."

Fortunately Stephen is back developing the software again with updates to the player and the imminent release of the *QTMEditor.* "QTM itself has undergone major changes since the last public release, most notably the inclusion of many more editor-related SWIs, and 8-channel song handling. The virtually completed *QTMEditor* module, which acts as an interface between a front-end program and the QTM module, to make the process of creating ProTracker music files as easy as the Sprite module makes creation of sprites, relies on the presence of the new QTM module and editor SWIs and so will be released alongside the new version of QTM."

Every tracker musician I know simply can't wait for a usable PD tracker editor, with many having to resort to the "un-user friendly" and commercially priced Digital Symphony package. Let's hope the *QTMEditor* fills this gap in the market. If you'd like to assist with the project, or put forward your own requirements, check out the proposed SWI changes archive on Arcade, and contact Stephen at sah3<64>soton.ac.uk

Batch

Version 2.4 of the invaluable *Batch_FSI* program is now available from author, Jochen Lueg's web site at http://www.argonet.co.uk/users/tudor. Version 2.4 incorporates bug fixes and a minor change to the interface. *Batch_FSI* allows you to automatically convert multiple image files using *ChangeFSI.*

Recommended PD Libraries

- APDL, 39 Knighton Park Rd, Sydenham, London SE26 5RN
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ





Utils

Several mainly education-related applications and utilities are available on John Williams' web site at http://www.argonet.co.uk/users/jrw/. These programs include *MonthCal* for creating Drawfile calendar sheets, *SplTrim* and *PatchPhas* for use with *Splosh* and *Phases* respectively and *Vdetect* for auto-loading of *VProtect* on floppy only systems.

Delirium protection

Version 2.2 of *Delirium* the popular graphical screen saver now includes password protection. As frontend coder Joe Oldak describes "The main new feature in version 2.20 is password protection. Quite a lot of effort has gone into making this as secure as possible. For example, on the password entry screen when a saver finishes, the Control/Alt/Break/Function keys are blocked out, to prevent users from bypassing the password." Version 2.2 also includes various other minor updates and a new saver pack is expected early in the new year. Check http://www.various-artists.demon.co.uk/delirium/

Music News

With a good range of commercial MIDI editors and PD support for all kinds of tracker formats the Acorn has never been in such a good position music wise. However, Mirko Vidovic of ARMada felt the lack of a forum for Acorn music discussion was holding things back. "It's a real pity not to have a true feedback of all the possibilities of all the Acorn music packages." To combat this problem, Mirko has set up an unmoderated mailing list. For details, check the ARMada web site at http://www.armada-fr.net

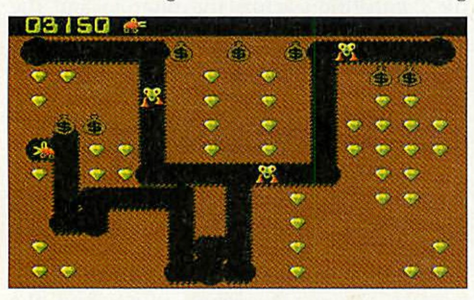
Contacting me

If you're a PD author, and you'd like to see your software mentioned on the PD page, or are a user with praise, criticism or a requirement for an application, please get in touch. You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to pdpage@acornuser.com (please send the URL of software for review, rather than e-mailing me the app itself).

Digger

Flashy 3D graphics and CDs packed with fantastic video may be the current trends in computer games, but for real playability many people often turn to the classic games of yesteryear, namely all those classic sprite based 8-bit games. The Acorn port of the classic *Digger* game is no exception. Many choose to update these original games for the current machines available, but for some, the original feel, graphics and sound of the classic games themselves must be preserved, and this is the route taken in the *Digger* port.

The game itself is a masterpiece of simplicity and playability. Move round the screen collecting the diamonds and avoiding





the nasties. As you move, you "dig" away the soil, and removing the earth from under a bag of coins, will let it fall to the ground. If you get it wrong, you get squished, but if your timing is just right you can take out one or more of the various baddies that are after you.

As it stands, *Digger* is a good port of the original game. It's got all the playability and most of that classic 8-bit feel, but for me, I'd like to see it updated for the 32-bit scene. *Mr Ee* on the BBC Micro had many more features over the original *Digger,* and it'd be great to see these ideas (and more) included. However, it's still a great game to see released, and it's available from the games section of Arcade BBS.

Megumi

This is yet another image viewer for RISC OS. It doesn't provide thumbnailing facilities as many of the recent releases like *PhotoFiler* have catered for, but instead offers support as a viewer for more unusual formats that aren't supported by *ChangeFSI.* Written by Dirk Krumbholz to view images encoded in formats generally associated with Anime pictures like ECC, MAG and PIC as well as more common formats like JPEG and Sprite. *Megumi* does the image decoding work at speed using ARM code routines and contains a whole host of handy features.

There's a built-in slideshow facility that can run in the desktop or full screen mode, with features like auto mode selection and forward/backward stepping on mouse clicks or automatically via a configurable timer. You can even scroll around particularly large pictures in full screen mode using the cursor keys.

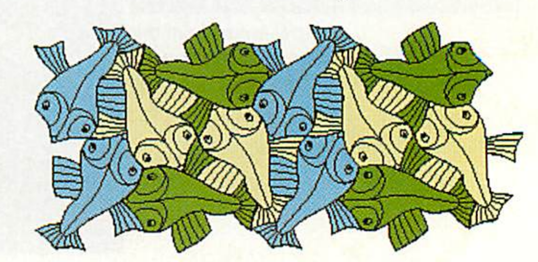
All this attention to detail makes *Megumi* an essential application, and with artist Lark's Anime style window graphics to go with it, this is a rather cool program. Surf to http://www.os.rim.or.jp/~sira-m/megumi.html and check it out.

Tilings

Tiling outline images together in the form shown in the screenshot above is not an easy process. How do you go about making these designs yourself? Tom McLean has the solution with his rather clever *Tilings* application. As Tom explains "Such tilings are produced by placing a shaped tile in a number of orientations, repetitively over a plane. For the tiles to fit together, only certain orientations of the tiles can be used, and they in turn constrain the allowed shapes. In spite of these restrictions, there are vast numbers of possible tilings which are really limited only by one's imagination." The program allows the shapes and the associated tilings to be generated with amazing graphical effect.

The applications of this nifty program are very wide ranging. Tom says "Schools have an interest in this type of thing and in much of the final aspects of screen presentation, I was helped by a former primary school head teacher. BECTa have expressed a possible interest in the application." *Tilings* can be obtained from both APDL and Five Star Marketing.

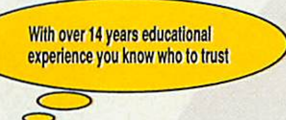






The names you can trust for all your computer requirements.





We supply the range of computers, A7000s, RiscPCs, Palmtops and NetWork Computers (NCs).



		(Inc VAT)
A7000+ 8Mb HD2.1Gb with 14" monitor	800.00	940.00
A7000+ 8Mb HD2.1Gb 32xCD with 14" monitor	845.00	992.88
A7000+ 8Mb HD2.1Gb 32xCD with 14" monitor, 200 watt speakers & 2 Anglia CDs	899.00	1056.33
233MHz StrongArm RiscPC 4Mb HD1.2Gb 8xCD with 14" monitor	950.00	1116.25
233MHz StrongArm RiscPC 10Mb HD1.2Gb 8xCD with 14" monitor	1040.00	1222.00
233MHz SA RPC 10Mb HD1.2Gb 32xCD with 14" monitor, 200 watt speakers & 2 Anglia CDs	1125.00	1321.88
J233 RiscPC 34Mb 1.7Gb 24x CD, with 14" monitor & 200w speakers	1400.00	1645.00

Special Promotion Computer Bundles

A7000+ 'Peak Performer' 8Mb 2.1Gb 32x CD, with 14" monitor & Foundation or Extreme software bundle	749.00	880.08
'Web Wizard' SA RPC 233Mhz 34Mb 1.7Gb 24x CD 56k modem & 15" monitor	1149.00	1350.08
Upgrade 14" Acorn systems to 15" Optiquest monitor (3 year warranty)	(add) 25.00	29.38
Upgrade 14" Acorn systems to 17" Optiquest monitor (3 year warranty)	(add) 110.00	129.25
Upgrade 14" Acorn systems to High spec Iiyama 17" monitor	(add) 150.00	176.25

Plus Digital Cameras, Software, Training, Extended Warranties, Networking. Etc.

FREE delivery on all Acorn computer systems.

We offer *extra discounts for Education* - Call us now for the most competitive value, high specification quote.
Whatever your needs or budget we can help with Leasing / HP / Educational accounts / Cheques or Credit & Debit cards.

StrongArm Upgrades back in stock

RiscOS 4 coming soon

For competitive Acorn education prices please call us as we generally match and in most cases beat the prices and specifications you have been given by other outlets.

CD-R/W *CD-ROM Drives* - CUMANA

!CDBlaze Software for the Acorn platform - This software supports CD-R / CD-RW and SCSI-3 MMC compatible drives - call for currently supported drives 79.99
CD-R Internal Panasonic 7502 SCSI drive & !CDBlaze Acorn software ...299.00
CD-R External Panasonic 7502 SCSI drive & !CDBlaze Acorn software ..349.00
CD-R blank discs (box of 10) 14.95

*****NEW CDRW DRIVE*****
16 speed read, 4 speed write and 4 speed re-write

CDRW Internal Yamaha 4416 drive with !CDBlaze 319.00
CDRW Ext. (plastic case) Yamaha 4416 drive Inc. !CDBlaze 354.00
CDRW Ext. (metal case) Yamaha 4416 drive Inc. !CDBlaze 389.00
CDRW Blank Re-Writable CD's 19.95
Above drives are available separately please deduct £60.00 if required

Oscar Encore 24 speed CD-ROM Parallel external drive for Acorns & PC with bi-directional parallel port. 169.00
Indigo 32 Speed CD-ROM IDE internal drives & CUMANA Acorn driver software for *A7000's and Risc PC's (after July '95)* 79.00
NEW PD drive
ProTeus 24 speed SCSI Internal drive with 1 cartridge....259.00
ProTeus 24 speed SCSI External drive with 1 cartridge 340.00
200 watt speakers 25.00
CD-NET (Networking software for sharing CD's 99.00

32Bit Cumana SCSI 2 Card interface, as fast as any on the market £149.00 + vat

CA006 16bit SCSI Interface cards for A5000/A4x0 ....69.00
CA008 8bit SCSI interface cards for A3000/ A30x0 ....64.00

Printers

(including // cable, Acorn & PC drivers)

Hewlett Packard (HP) 690c colour inkjet (excludes photo real ink and case) 112.80
HP Deskjet 420L colour inkjet 84.80
Hewlett Packard (HP) 895XI 196.80
Hewlett Packard (HP) 2000c 467.50
Epson Stylus Colour 440 ....126.00
Epson Stylus Colour 640 ....152.00
Epson Stylus Colour 740 ....196.00
Call for other makes, models and quantities.

IDE & SCSI Internal Drives

IDE Samsung 4.3Gb drive....124.00
SCSI IBM Ultrastar 9es 4.5Gb 7200rpm 7.5ms 68pins 229.00
SCSI Quantum Fireball SE 4.3Gb 5400rpm 9ms....209.00



Trade & Educational customers are welcome.

Please call for separate prices on both Acorn and Cumana equipment.



Call us now on Tel +44 (0)1279-730800/730900 Fax +44 (0)1279-730809. sales @cumana.co.uk.
Cumana is a trading name of : Cannon Computing, Whitegate, Dunmow Road, Hatfield Heath, Bishop's Stortford, Hertfordshire, CM22 7ED. Partners: Nigel D. & Sara L. Cannon. AU/Jan '99.

Special Offer

Destiny awaits

£30 inc VAT

One of the most talked about Acorn games of 1998 is available now from Tau Press

Transported to an unknown world you must venture into a dangerous domain. Not only are you searching for power cells so you can return, you have to survive and battle against the evil denizens who are determined to kill you.

It's either them or you. Can you hack it?

"...The weaponry in this game is second to none, and outclasses Quake or Doom by a long way."
Acorn Arcade

"I would say that it is a good buy for all Risc PC owners"
Acorn Arcade

Destiny features:

- High resolution 3D graphics
- Huge varied levels
- Serious fire power
- Intelligent enemies
- Original music
- Configurable controls

And much more never seen in any other game of this type on any other platform

ORDER YOUR COPY NOW AND HAVE AN EXPLOSIVE 1999

ORDER FORM

YES! Please send me _____ copies of ***Destiny*** @ £30 each

Postage & Packing
UK postage FREE
Europe (outside UK), add £1
Rest of world, add £2

Name ....

Address ....

Postcode .... E-mail ....

I wish to pay by:

- [ ] Cheque/postal order (payable to Tau Press Ltd)
- [ ] Credit Card (Visa/Barclaycard/Mastercard/Access)

Credit Card No: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry Date: /

- [ ] Please tick here if you do not wish to receive promotional information from other companies

AU9902

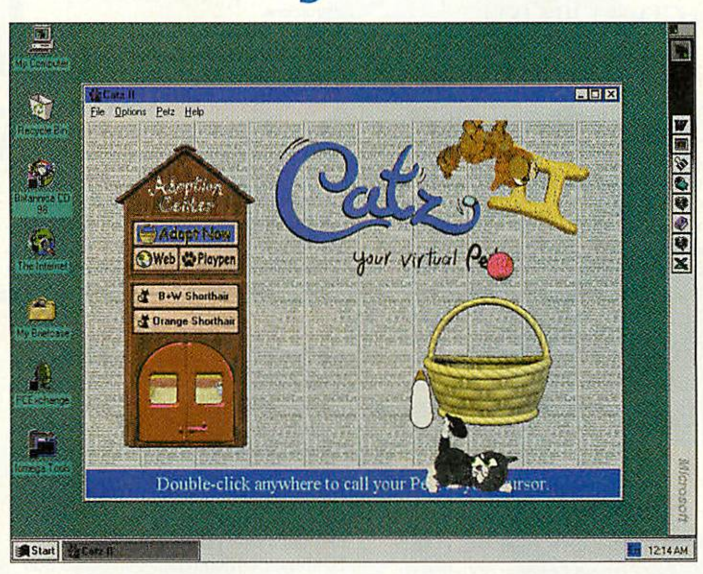
Send your order to: Destiny Offer, Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP.



Playable on A7000+, Risc PC 600 or better. StrongARM recommended. Requires CD-ROM drive, 10Mb RAM and 13Mb hard disc space minimum.



Direct X directly



Last issue I mentioned the launch of *!PCPro3*. I had a pre-release version, but as I write the official version is out and despite a few bugs appears to be performing well. Aleph1 are working on bug fixes and new code is being tested. But the big news is that whereas my pre-release version of *!PCPro3* was without Direct X, that omission has now been rectified and I can report from my admittedly limited test that it's OK.

Now all those programs that have apparently loaded only to fall flat when attempting to run because of no Direct X driver is now worth another try. This doesn't affect most business-type software, but it does affect games and even some education programs I've tried. So what edifying software did I test? Erm, would you believe *Catz*?

Catz and *Dogz* are two totally useless but mildly diverting toys that stop you working by demanding you play with your pet as it tumbles around the screen trying to be cute: rather like those unlamented Tamagochi. So now you can waste your time with *Catz* and *Dogz* as they run fine on the PC card and they don't leave hairs on the sofa.

Rule Britannica

I had an e-mail the other day asking for more details about how well the Britannica CDs run on the PC card. I've mentioned this package before but because they are one of the better pieces of software available and they illustrate a few problems and solutions, I'll mention them again.

First off; do they run? Yes, albeit slowly even with faster hardware. But you may encounter problems unless your system is capable of reading long filenames from CD. *!PCPro* is able to handle long filenames on hard drive partitions and the SCSI drivers now included with *!PCPro* from Andreas Walters are compatible and certainly access all my Win95-only CDs. This is crucial on Britannica, for example, and pictures are otherwise inaccessible.

Where you might hit problems is with using a CD-ROM via the Risc PC IDE interface. To do this you need to set up the protected mode CDFS software – but this doesn't work for everyone and is not currently able to support sound functions. Aleph say this is proving a problem to solve but hope to put some more effort into it soon.

Can you access the internet links? Yes, I've just done it. Britannica comes with Internet Explorer for this purpose. A while ago I set up a Win95 dial-up link to Argonet – which requires you know your log-on codes but is fairly simple. When you click on an internet link in the encyclopaedia, Britannica brings up the dial-up window so you can get on-line, then it sends the Web address of the link you've selected. Easy.

Can you see the movies? Not really. Even if you know what they are they're only just about recognisable. Not very useful but illustrates a remaining problem of supporting QuickTime movies. This was an old Apple program ported to DOS and a bit quirky.

Finally, sound. Thus far, and with the exception of sound relating to QuickTime, most sound can be supported with the basic sound drivers within *!PCPro3*. That's usually enough for average Windoze software. But the addition of *PCSound Pro* from R-Comp provides enhanced support especially for DOS software and for MIDI files.

Network links

Never having had anything much to do with networks I'm having to learn about them for the first time. Most people know you can mix Acorns and PCs on the same network. I was encouraged to discover that Aleph1 also have software to allow a PC card access to the Acorn Ethernet module. Their web site is at www.aleph1.co.uk and its listed there.

Year 2000

According to Aleph1, the PC card has no on-board clock and takes all date and clock information from the host machine. All versions of *!PC* from 2.13 onwards read the whole date and pass this information on to the software running on the card. Thus if that software is Y2K compliant, all should be well.

But if it isn't, there's nothing *PCPro* can do to force it to comply. Users of older software and/or podules should contact Aleph1 for help if Y2K problems might disrupt their applications.

Don't despair

And in case you are feeling as though now might be the time to give up on Acorn, I'd just like to mention a few problems my Windoze contacts have reported recently – quite apart from any Y2K issues:

One is having big problems with internet software. Not only is getting on line hard, but sending attachments just isn't really working. Why? If he knew that, there'd be no problem. Another has just lost his entire hard drive contents following a crash. A third is on his third CD writer: this one appears to be working at last. Then a business contact tried to get help from Microsoft relating to a MS software package but was refused on the grounds it was working via a network which isn't run with MS software.

Not only that, but of four friends of the Editor, non-computer people who bought PCs, three had to exchange their entire machines and all four required expert help to get the PCs working usefully. The Education Editor, Pam Turnbull, who is experienced with Acorns, PCs and Macs has two PCs, one "name-brand" machine won't run half the software she gets for review.

And Paul Vigay, Computer Resources Manager, reports that of 50 PCs bought by his school, 15 have broken down in three months. Their 300 Acorn machines just go on and on.

Still thinking of changing?

Contacting me

You can contact me, Mike Buckingham, by post at: Acorn User, Media House, Adlington Park, Macclesfield SK10 4NP or by dropping me an e-mail at: pcpage@acornuser.com

Tel: 01924 254800 Fax: 01924 258036 E.Mail: sales@davyn.demon.co.uk
For a full catalogue visit our web site WEB: http://www.davyn.demon.co.uk

Acorn Computers

Acorn — Centres of Technology

A7000+	8m	1.2GB HD		£769.00d
A7000+	8m	Net		£659.00d
RiscPC 233	4m	1.2GB HD	8xCD	£979.00d
RiscPC 233	10m	1.2GB HD	24xCD	£1175.00d
RiscPC 233	34m	1.7GB HD	24xCD	£1299.00d

Extended Warranty

A7000 / A7000+ 3 years £94.00
A7000 / A7000+ 5 years £188.00
RPC StrongARM 3 years £235.00
RPC StrongARM 5 years £470.00

Monitors

Acorn AKF60 £199.00d
Iiyama 17"S701GT .26dot £379.00d
Iiyama 17"A701 Pro .25dot £429.00d
Iiyama 19"S901GT .27dot £723.00e
Iiyama 21"GT .27dot £986.00e
Samsung 15" 500s .28dot £159.00d
Samsung 17" 700s .28dot £269.00d
Samsung 17" 700p .26dot £379.00d
Samsung 19" 900s .26dot £539.00e
All Samsung Monitors come with a 3 Year on Site Warranty

RPC Upgrades

A7000+ 16Mb EDO RAM £29.00b
A7000+ 32Mb EDO RAM £45.00c
RiscPC 16Mb RAM £35.00b
RiscPC 32Mb RAM £65.00c
RiscPC 1Mb VRAMsimtec £59.00c
RiscPC 2Mb VRAMsimtec £95.00c
2 podule Backplane £34.00a
486-DX4-100 PC Upgrade £198.00d
586-100 PC Upgrade £292.00d
586-133 512k PC Upgrade £360.00d
Access+ Card £139.00c
Strong Arm upgrade 233 £289.00c
Audio Mixer £39.00a
Movie Magic £279.00c
Risc OS 3.7 Chips + Software £64.00b
Second Slice *no PSU* £88.00d
Second Slice *with PSU* £139.00d
Sound Card £34.00b

Memorabilia

Acorn China Mug £4.75a
Acorn Parker Pen £4.50a
Acorn HTML Mouse Mat £5.50a

Hardware Upgrades

170mb IDE 2.5" HD £65.00c
340mb IDE 2.5" HD £95.00c
6.4gb IDE 3.5" HD £169.00c
4.3gb SCSI 3.5" HD £299.00c
32X CD Atapi £59.00c
Lark Midi Sound-Sa. £172.00c
Risc OS 3.1 Upgrade Chips £30.00a
RiscTV *(Irlam)* £295.00c
Teletext module for above £45.00a
SCSI 16bit £110.00c
SCSI 2 32bit (power-tec) £158.00c
SCSI 3 32bit (power-tec) £205.00c
TV Tuner + Teletext £159.00c
All Upgrades fitted free if ordered with Computer else £18.00

Scanners

SPECIAL OFFER
Plustec OpticPro 4831p
A4 Colour Flatbed Scanner 300x600 DPI
Scanner + PC Software £69.00d
Above + Imagmaster/Twain £99.00d
Epson GTX5500 scsi £239.00d
Epson GT9500 para/scsi £539.00d
Image Master/Twain Driver £35.00a

Printers

Canon
BJC-250 (colour) £109.00d
BJC-4300 (colour) £139.00d
BJC-4650 (A3 colour) £299.00d
Epson
Stylus 440 (colour) £129.00d
Stylus 640 (colour) £179.00d
Stylus 850 (colour) £289.00d
Stylus 1520 (A3 colour) £639.00d
Hewlett Packard
DeskJet 420C (colour) £99.00d
DeskJet 690C (colour) £149.00d
LaserJet 6L (Black) £319.00d
Calligraph
A4 1200 Laser (black) £1099.00d

Printer Inks/Refills



Inkjet Refills are an economical way of re-charging your existing cartridge All inks come complete with gloves, syringe and easy to use instructions.
Single 20ml Any Colour £6.00a
Twin 2x20ml Any Colour £10.00a
Bulk 125ml Any Colour £21.00b

'CartridgeMate' A new and easy to use cartridge refill system for HP 51626A high cap. cartridges
A refill system with no mess
Comprises: CartridgeMate & 2 x 40ml
Ink Tanks Cartridge not included £30.00b
Ink Tank 2 x 40ml £19.00a
We also carry a large stock of inkjet cartridges and ribbons

Printable Items

Colour'n Wear (2 white Baseball Caps + 3 transfer papers) £10.50b
Colour'n Wear (2 white T Shirts + 4 transfer papers £13.50b
Colour'n Wear
(4 transfer papers only) £9.00a
(10 transfer papers only) £13.50b
Design & Print Mouse Mat £4.00a
Col Inkjet matt photo white paper 25 sheets x 120gms £5.50b

Software

ArtWorks (CC) £99.00c
Bitfolio 7 Clipart CD (Lino) £40.00c
Doom Trilogy 3xCD (RCom) £33.00a
Descent (RCom) £30.00a
Empire Soccer (Empire) £24.00a
Impression Publisher (CC) £139.00c
Impression Style (CC) £79.00c
Personal Accounts 4(Apricot) £40.00a
Prophet 3 (Apri) £163.00c
RiscCAD (Dav) £250.00C
Simon the SorcererCD(G/W) £33.00a
These are just a small selection of Software ring for details

Spares & Repairs

A300/400
backplane 2/4 pod S/U £30.00b
memory upgrade 2mb new £79.00a
memory upgrade 4mb new £89.00c
Power Supply Refurb/Exch £40.00c
A400/1
backplane 4 pod S/U £30.00b
Floppy Drive S/U £30.00b
memory upgrade 1mb new £35.00a
Power Supply Refurb/Exch £40.00c
A3000
Floppy Drive S/U £30.00b
Keyboard S/U £20.00b
memory upgrade 2mb new £39.00a
memory upgrade 4mb new £65.00a
PCB Refurb/Exch £90.00d
Power Supply Refurb/Exch £30.00c
Power Supply Refurb £40.00c
A3010
Floppy Drive new £89.00c
Keyboard S/U £20.00b
memory upgrade 1-2mb new £34.00a
memory upgrade 1-4mb new £65.00a
PCB Refurb/Exch £99.00d
A3020
Floppy Drive new £89.00c
Keyboard S/U £20.00b
memory upgrade 2-4mb new £59.00a
PCB Refurb/Exch £99.00d
A4000
Floppy Drive new £90.00c
Keyboard (compleate) new £99.00b
memory upgrade 2-4mb new £[illegible]00a
PCB Refurb/Exch £[illegible]0d
Power Supply Refurb/Exch £[illegible]
A5000
Floppy Drive new £[illegible]
Keyboard inner S/U £[illegible]
memory upgrade 2-4mb new £[illegible]
PCB Refurb/Exch £[illegible]
Power Supply Refurb/Exch £[illegible]
RPC
PCB MK 2 Refurb/Exch £[illegible]
Power Supply Refurb/Exch £[illegible]
Pocket Book
A,M,or PC+-Link (each) £59.00b
Parallel Link [illegible]
Power Supply [illegible]
Flash SSD 1MB [illegible]
Fits All Computers
IDE/CD interface new £[illegible]00c
These are just a small selection of new and refurbished spares ring for details

Bargain Basement

Alderbarron (Evolution) £5.00a
Boxing Manager (Krisalis) £5.00a
Frame-It 1 or 2 (Davyn)each £5.00a
Publisher irregular frames
Hero Quest (Krisalis) £15.00a
Jr.Sibelius (Sib) £39.00b
Landmarks full range(LL)each £23.00a
Magic Pockets (BitMap) £13.00a
Music Box (Topo) £20.00a
Number Tiles (Topo) £17.00a
PhotoBase1930s,50s,60s Each(LL) £39.00a
Prime Mover (Minerva) £20.00a
Pro Artisan 2 (Clares) £90.00c
Science Series CDx3 (YITM) £40.00a
Small (Virgo) £15.00a
SmArt (4Mation) £37.00a
SmArt Files (4Mat)each £17.00a
SmArt File Mod.Lang.(4Mat) £21.00a
Tiny Puzzle (Topo) 15.00a
Waiter (Digital) £10.00a

How To Order

Cheques: should be made payable to **Davyn Computers**

Credit Cards: you may also pay byVisa, Delta, Euro, Switch, Electron, or Master Card. We normally make no charge for this, and take no payment until goods are ready for dispatch, We need the card holders address and telephone number, card number and issue number if any and the expiry date.

Carriage: charges are as follows
a Small Recorded £2.00
b Medium Recorded £3.50
c Med/Large Recorded £5.00
d Courier £10.00
e Courier Large £15.00

Official Orders: are welcome from UK education and government institutions (invoices are due for payment within 14 days and are subject to carriage and late payment charges).

VAT is included:

Order Address: please send your orders to;
**Davyn Computer Services
'The Workshop'
off Princess Street, Sandal, Wakefield, West Yorks. WF1 5NY**

Opening Hours:
Monday 9.30 - 5.30
Tuesday 9.30 - 5.30
Wednesday 9.30 - 5.30
Thursday 9.30 - 7.30
Friday 9.30 - 7.30
Saturday 9.30 - 5.30

RiscPC
Special Offer

RISC OS 3.71 in ROM
StrongARM 233MHz
24x CD-ROM
2GB hard drive
32MB RAM (max 256MB)
2MB V-RAM
15" monitor + 80W speakers
56K External Modem
Acorn !Browse & Java Software
1 year RTB warranty
EasyWriter Pro Software
Finance Available 9.9%

£1350 inc VAT

The Web Wizard

Davyn Computer Services

Terms: All products, prices and specifications are offered in good faith and are subject to change without notice. We Process all orders immediatly, but suppliers do sometimes keep us waiting. Goods are guaranteed but are not supplied on approval. Returns and cancellations can only be accepted by prior agreement and there may be a restocking and administration charge A full copy of our terms are available upon request. E.&.O.E 4th January 1999



Mice – not nice

Owain Cole

It's a mess, and the only way out is to call in an expert. You are an elite member of MICE – the Mammal Infestation Control Experts. Your mission:

1. *Reduce all mammalian life forms to constituent parts.*
2. *There is no 2.*

That's about it really. You must employ any means available to splat the rats or, perhaps we should say, slice the mice. The target has been set, with the clock ticking, prepare for your first assignment.

How to kill the vermin

Use the cursors and the mouse. Mouse selects weapon from the right and places on the play area. The cursors move your view point around the map. Click on the map to move the screen quickly.

Escape	returns to main menu
P	pauses during the game
Q and S	control the music volume during the game

Mousey hints

Only pink mice produce babies. If you click on the map, it moves the screen to the place where you clicked. If you can't find the last mice on the level, try to see if there are any tunnels which you can't get to, and then place bombs nearby to get them.

Killing mice gives you extra time. Press P to pause the game. Click at the top of the main menu to read the high scores. Delete the file called 'HighScores' to reset the high scores.

Level Designer

There is a very basic level designer built into the game which allows you to create, load, save and test your own levels and add them to the list of levels which the game uses.

To activate the level designer, in the main menu press L and D at the same time. You will be prompted to enter a filename, to load a new file, or you can type in NEW (in capitals) and you'll be given a blank area.

Use the three mouse buttons to design your map. You can use the cursors to move about, or the map at the top of the screen, like in the real game. LMB draws grass, MMB is tunnel and RMB is path.

If you loaded another level, your level will already be populated. However, you can repopulate any level by pressing *I*. Please note that you don't need to populate your levels, the mice aren't saved in the level file, it's just a test.

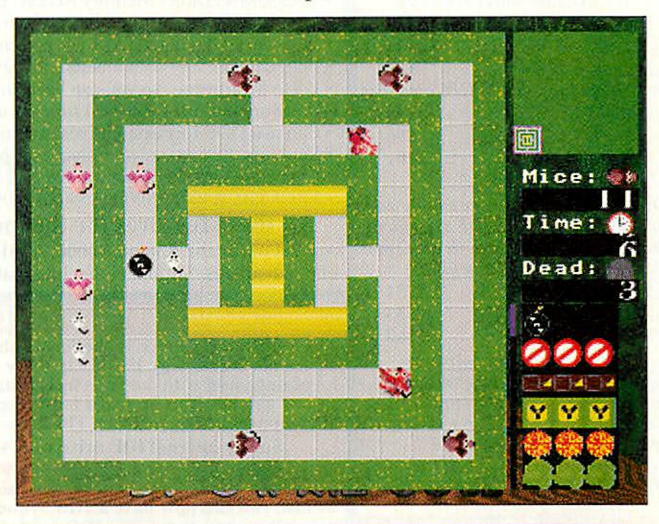
Please note that the mice aren't intelligent and so you should ensure that they don't wander off the edge of the map otherwise your computer may crash. If any do, then press *I* quick. To stop the mice wandering off, you should ensure that there is a border of grass all the way round the map.

The number of mice is shown in the normal place. The mice do have babies so press *I* to find out how many mice there will be at the start.

***MICE** needs the **ABCLibrary module** (loaded) which should be located in your **!System** directory to run. Alternatively you can double-click it directly from the same directory as **!Mice**.*

Saving and Loading

Save your level by pressing S, then type in the filename. Load a level with L and typing in the level or NEW for a new map.



Weapons

The MICE operative toolbag consists of:

- Medium Range Explosive Device;
- The Blockader™ – stops mice in their tracks;
- SnapTrap – repeatedly kills mice – inhumanely;
- Lump-o-Chernobyl Reactor Wall – may cause sterility in females and insanity in others;
- Molotov Cocktail – not intended for actual human consumption;
- GAS – Gratuitous Anti-mouse Spray – use with caution.

Disc information

The software on the cover disc has been compressed using ArcFS 2 from VTi, and are opened by running a copy of ArcFS then double-clicking on the archive to open it. There is a copy of ArcFS on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover discs have been checked for viruses using Killer version 3.001 from Pineapple Software.

Regular & Features

- The Java classes
- Mike Cook's timer software
- All the *INFO programs

I hate CDs

If you don't have a CD-ROM drive you can replace it with a floppy containing this month's Acorn User programs simply by returning the cover CD to: *Acorn User, Tau Press Ltd., Media House, Adlington Park, SK10 4NP.* We will send you a floppy disc containing the programs and files for this month.

3.5" IDE Hard Discs

	Drive	Plus i/face
210 Mb	£42	£81
420 Mb	£52	£87
540 Mb	£59	£107
850 Mb	£65	£112
1.1 Gb	£72	£119
2.1 Gb	£91	£138
2.5 Gb	£97	£144
3.2 Gb	£99	£146
4.2 Gb	£112	£159
5.1 Gb	£119	£166
6.3 Gb	£129	£176
8.2 Gb	£152	£199
10 Gb	£179	£226
11.8 Gb 5¼"	£197	£244

'Plus i/face' price includes an APDL fast IDE interface.

2.5" IDE Hard Discs

	A3020	3010/3000
30 Mb	£36	£79
60 Mb	£49	£99
80 Mb	£59	£109
120 Mb	£67	£117
170 Mb	£72	£122
210 Mb	£84	£134
250 Mb	£89	£139
330 Mb	£94	£144
420 Mb	£99	£149
512 Mb	£120	£170
800 Mb	-	£178
2.1 Gb	-	£197

A3010/3000 includes APDL IDE interface, A3020 includes fitting kit

SCSI Hard Discs

210 Mb	£35
420 Mb h/h	£55
540 Mb	£68
1 Gb	£79
4.2 Gb h/h	£159
4.2 Gb	£185
8.7 Gb h/h	£309

'h/h' indicates half-height approx 1½ inches high, others are 1" high.

IDE CD ROM drives

Internal

Drive with all cables and drivers for RO 3.6+ where required

24x	£47
32x	£49
36x	£54

Drive including APDL IDE interface

24x	£94
32x	£96
36x	£101

External

Drive in case with power supply and including an APDL IDE interface. Probably the best way to fit a CD to a pre- RISC-PC machine.

24x	£151
32x	£155
36x	£160

CD ROM driver software

Works with most ATAPI CDs including Goldstar, Hitachi, Lite-on, Mitsumi, Sony, Panasonic, Samsung, Pioneer, Toshiba, Sanyo, NEC, etc. Includes CDFS so can be used with RISC-OS 3.5. Intended for the RPC but can be used with an A5000.

Only £8 or £7 with a drive

Risc PC RAM

8 Mb	£8
16 Mb	£29
32 Mb	£58
32 Mb High Clearance	£63
64 Mb *from*	£99
2 Mb VRAM	£67
1 Mb to 2 Mb exchange	£47

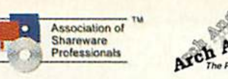
Datafile PD CDs

PD CD - 3	£8.50
PD CD - 4	£12.50
PD CD - 5	£8.50

Various games

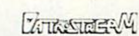
Emotions	(RPC only)	£14.95
Flying High	(RPC only)	£14.95
Fire and Ice	(not S/Arm)	£8.50
Hero Quest	(not S/Arm)	£7.50
Quest for Gold		£6.00

Public Domain, Shareware and other low cost hardware and software for Acorn computers










Prices include VAT and UK carriage except hard drives add £5 for internal drives, £8 external

This is only a fraction of what we have available. We also have thousands of discs PD and Shareware and around 500 discs of Acorn format clip art. For a full catalogue on 800K or 1.6Mb disc please send 50p or two 1st class stamps or see our web site.

APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
Phone: 0181 778 2659 *Fax: 0181 488 0487* www.apdl.co..uk/

VISA

APDL Public Domain, Clip Art and other CDs

APDL PD-1 The best PD CD from the best PD library. Over 1,800 programs and utilities, more than 100 novels, etc. No games, clip art, music, or other non-serious stuff. **only £12.50**

Both for just £22

APDL PD-2 Around 700 games and novelties, over 250 games cheats and over 200 demos, plus over 2,000 music files and more than 550 digitised sound samples. **only £12.50**

DTP-1 and DTP-2 Each have over 500Mb of clip art files, all ready to use in Acorn Draw, Sprite or Artworks format. Ideal for use in education. **only £15 each**

DTP-3 The third highly acclaimed APDL clip art CD. More than 720Mb of material. Great for schools or anyone who needs a huge collection of clip art at a sensible price. **only £17.50**

DTP-1 plus DTP-2 plus DTP-3, just £40

DTP-4 Our new clip art CD. Over 12,000 clip art files, plus more than 400 Artworks files and 170 high quality colour pictures. All catalogued and complete with thumbnail images **only £19.50**

Games CD 1 A collection of twenty of the best PD games of all types. Ready to run direct from the CD on almost any machine. Hours of fun for an unbeatable price. **only £7.90**

Fantasy Pictures By request from our customers, the pictures from the Fantasy section of the APDL catalogue. Lots of Sword 'n Sorcery pics and many others **only £7.90**



A CD from APDL especially for schools. Has all the things we know you want. More than 5,000 Acorn format clip art images, hundreds of e-texts, over 300 popular and useful programs.... **£16.50** **Ten for just £79**

Earth in Space Pictures, databases, information on stars, planets, moons, space missions, etc. etc. A huge amount of data at a realistic price. **only £9.90**

Wizard Apprentice Have you got what it takes to become a Wizard? 100 levels of this great game with superb graphics and sound. RISC-PC only **new low price £14.95**

Generation Design collection New version now has eight games. AlfaXL5, Pharoahs Secret Tombs, Last Cybermoch, Sea Trek, Caves of Confusion, Robocatch, and two new additions, Gold Run and Jewels of Jezabar. Also available on disc. **£17.50**

APDL ideA fast IDE interface

- No complicated setting up. It's self-configuring so just plug it in!
- Uses DMA (Direct Memory Access) on Risc PC. More than twice as fast as the built in IDE interface or others which don't use DMA.
- Includes CDFS and ATAPI CD drivers for many popular CD ROMs.
- Four devices, any combination of CDs and hard drives.
- Up to 8 partitions, so you can have large drives on pre RO 3.6 machines
- Software in flash EEPROM for easy update with VProtect for earlier machines.
- Can use DOS formatted drives or removable discs.
- Supports the new range of Syquest SparQ low cost 1Gb removable drives.
- Connectors are available for external drives or CD ROMs
- Fits A310, A400, A5000, A540, A7000 and any RiscPC.

All these features for the incredibly low price of just £52

A version for the A3000, A4000, A3010 or A3020 is available with all the above features. Supports two internal and two external devices - £67

Syquest SparQ 1Gb removable drive

The 1Gb SparQ drive is the ideal solution for backing up larger hard drives where old technology like a Zip drive just isn't realistic. Big enough to hold a lot of data, and with our interface, faster than a built-in hard drive on a RiscPC so you can use it as an extra hard disc. Discs are much cheaper than anything of comparable size, just £29. The drive can be fitted in a 3½" or 5¼" drive bay.

SparQ internal IDE drive with APDL fast IDE interface just £199

NEW - APDL printer port Syquest drive

At last, you can now have a 1Gb Syquest SparQ printer port drive at a realistic price. It isn't as fast as the IDE version but you can fit it to any machine with a bi-directional printer port (ie. anything with a hi-density floppy drive) and move it between machines. With Acorn and DOS driver software. just £199

ACE 586 PC cards

Available with 128K cache from just £199 or 512K cache from £299. We can offer a trade in against your old card, which makes it even cheaper. Good performance for Windows at a sensible APDL price.

General software

Faster PC - £20 The alternative XT PC emulator. Works on any model with 2Mb RAM from an A3000 to a Strong ARM RPC.

PowerBase - £15 Popular extremely powerful but very easy to use database. With examples, tutorials and printed manuals. Better than most products costing many times the price. Does everything that 99% of database users will ever need.

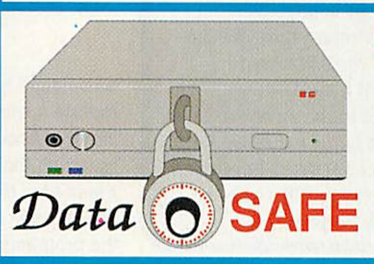
MenuBar - £15 The very best pull-down menu system. An absolute essential for any hard disc user. You can switch between up to 30 different menu bars. Incredibly easy to set up, add items to menus, move them, etc.

Tiger - £15 Lets you use very long descriptive filenames. Unlike some products this is very robust as it works in parallel with the filer so can't corrupt discs.

WorkTop - £15 Switch between up to 30 different environments with a single mouse click. Stars the tasks you require, opens directories, loads files, changes screen mode. Just like moving to another computer. An essential productivity tool.

Ancestry Plus - £59 The long awaited replacement for Graham Crow's very popular Ancestry genealogy program is now available. Desktop version of the original program with some features of Ancestry 2 (not written by Graham). A discount is offered to users of Ancestry or Ancestry 2

Upgrade prices, Ancestry 1 - £50, Ancestry 2 - £40



Data Safe - A new concept in backup and data security

A new idea from APDL, Data Safe consists of an external case to hold a 3.5" IDE hard drive, connected to your machine's printer port. This gives a large capacity portable drive, movable between machines and locations. Ideal for backup, secure data storage and transport. The filer has all the features of our ideA card so you can partition drives, password protect partitions, etc. Great for schools. Supply your own drive or we'll fit one for you.

Data Safe *Super* has the drive fitted in a removable drawer. You can fit a similar drawer to your Risc PC (best if you use our IDE card) and then just unplug the drive from the RPC and transfer data to another machine using the Data Safe.

Prices start at **£104** or with a 3.2Gb drive from just **£199**

Talking *turkey*

Paul Wheatley and **Alex Moresby** talk to the teams that are taking part in the Evolution competition

DFI

DFI are renowned for their 3D coding and as their *Evolution* entry demonstrates, they're a force to be reckoned with. I talked to DFI main-man, Paul Thompson, during the coding of his latest production for Evolution.

Paul: *What factors make the best demo? What's the most important to you, presentation or clever coding?*

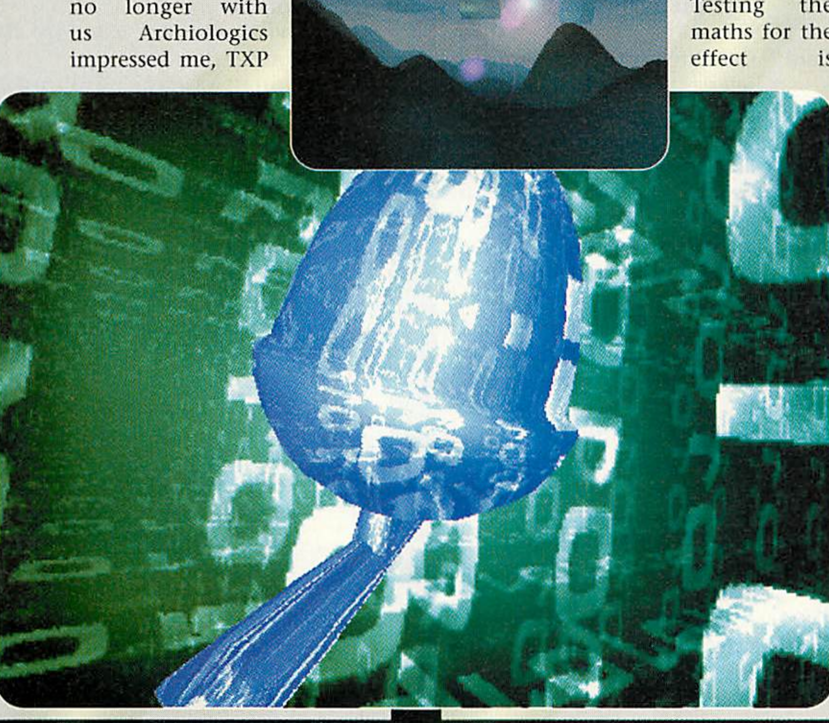
PT: I'm very much in favour of good programming; that'll impress me far more than a nicely linked sound-track. Presentation has it's place, but it should never overwhelm the code. The whole point of a demo, as far as I'm concerned, is to show just how powerful the computer is – and that power is demonstrated best by complex, real time generated graphics rather than a slide show or MPEG player.

Paul: *Why do demo teams have to be pretentious?*

PT: I blame their parents.

Paul: *Which demo productions have inspired and influenced your demo writing?*

PT: I never really kept tabs with the PC or Amiga demo scenes. But the demo teams I remember and respect the most are: The Carebears, Future Crew, Complex, The Black Lotus and Statix/Psychic Link. From the Acorn scene: Icebird and no longer with us Archiologics impressed me, TXP annoyed as much as they inspired and ARMOric's code is always very interesting.



Paul: *How do you go about producing a demo?*

PT: The inspiration to create a new effect can come from many places: an animation on TV, a static image, or listening to music. Once the concept exists it's a matter of finding a quick way to render something similar on the computer, a process that more commonly involves pen and ink than a text editor. Testing the maths for the effect is usually done in BBC BASIC, before converting it piece by piece into assembler. Any necessary graphics are cobbled together in whatever comes to hand – usually Photodesk or Photoshop.



Paul: *Evolution came together from cooperation between all the key demo teams following the cancellation of Acorn World and the loss of the planned Revelation competition. How important are these events for the scene, and is this a landmark in the growth of the Acorn demo scene?*

PT: The loss of Acorn World and Revelation '98 was very disappointing. To attract new teams we really need high profile events with great prizes, big projectors and dancing flamingos. I greatly appreciate *Acorn User's* involvement, but the big teams are all becoming too busy to write, and too few new ones are appearing. The future is less than certain.

Paul: *What next for DFI?*

PT: After this demo? I plan to pass my degree, sleep and watch some TV.

Kulture

Kulture are one of the longest running teams on the Acorn scene, although at first, you may not think it. Starting out as Quantum in the late 80's, the team dragged Acorn demos kicking and screaming into the 90's with the release of Liquid Dreams, a demo that finally brought proper transitions, design and great music to the scene. They may have changed their name, but their agenda remains...

Alex: *What factors make the best demo?*

Stu: For me it's presentation backed up by clever coding. The clever coding gives you the ability for an increase in presentation quality. In the end though it's what the beast looks like that counts.

Paul: The music is also very important. If you can tie together all the graphical and coding elements of the demo with the soundtrack, you're going to have an impressive production on your hands. The Amiga scene influenced my views on demos very strongly, where classic productions like Desert Dream, Arte and Full Moon converted me to the way of presentation led demos.

Alex: *You criticised other teams in Liquid Dreams for not thinking about presentation. Do you think things have improved now?*

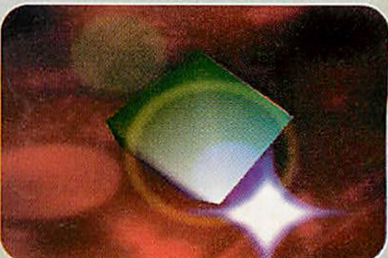
Paul: Things have improved a lot, but there's still a long way to go right across the Acorn scene – the problem goes beyond simply the demo scene. For some reason, most people seem to think that shoddy graphics and design is acceptable, when in fact it just makes a lot of Acorn software look like a joke, even if there's a good application underneath.

Stu: I wasn't in Kulture at the time of Liquid Dreams but I do think things have improved now. Paul is right though, we've all got to be a lot more professional in what we do.









Alex: *What kind of process does demo writing involve?*

Stu: Basically it's a mad panic! Good music, plenty of food and late nights usually come into it..

Paul: Certainly with our last two releases we've had a major rush to meet the competition deadlines, so we haven't been able to put in everything we wanted. We wrote *Mobius* in about five days solid, but as Stu will testify I was beginning to lose my sanity by the end of it...

Alex: *How important are competitions like Evolution for the Acorn demo scene?*

Stu: I think they are very important for the scene, the competition element gives everyone a bit of a kick up the arse. The problem is that the overall number of demos in a year decreases as everybody waits for the competition. Personally I think there should be some sort of Demo Oscars running over a whole year. It might encourage more development and releases.

Paul: Now that we've got Evolution out of the way, the next stage is to get all the teams talking again, and plan out where we want to go next. I think Stu's 'Oscars' idea could be the way forward...

Alex: *What are your plans for the future?*

Stu: I think we are going to try and do something for next spring. I want to finish Scorpion and make it into the complete 2D/3D engine it's designed for and make a demo worthy enough to show off it's powers. Oh and I want to finish my PhD! We've also got a lot of development work in the pipeline for our *Delirium* screen saver.

Alex: *Is there anything you'd like to achieve in future demos that you've not yet managed to do?*

Paul: More transitions. A demo where everything flows together.

Stu: More and better 3D stuff linked to a complete physics engine. I want to incorporate some of the modern technical advances found in research circles. You'll have to wait and see.

Reactive

Reactive is one of the newer teams on the scene, and like Divine Nature is a group strongly tipped for the future. I questioned coder David Gamble on his demo views.

Paul: *Why do demo teams and demo productions have to have pretentious names?*

David: It's an attitude thing. The demo scene in general is strongly influenced by the scenes on other hardware – such as the Amiga, Spectrum and so on, which are no longer supported. There's a 'renegade' theme on those platforms, and that echoes through, making the demo scene somewhere to show some attitude, voice some (outlandish) opinions and make a statement.

Paul: *What first got you into writing demos?*

David: I think that I, personally got into demos as a direct result of talking to ARMOric (The Grandfather of the Scene on the Acorn). He put me in touch with a few of the other groups (DFI, Icebird), and the attitude and support I got from the other coders drew me in.

Paul: *What's the most important to you, presentation or clever coding?*

David: To me, personally, it's clever code. I think Joe prefers presentation (being a graphics artist). That way we cover both bases, to produce something that works for both extremes.

Paul: *How do you go about creating a demo from start to finish?*

David: With Reactivity, we started off with the code I had laid down, produced a storyboard from that. We then spent quite a while refining the storyboard, until we had something impressive. I re-coded effectively from scratch, and wrote a track to fit in with it (based on a nice breakbeat track I heard somewhere). I coded all the effects individually once I had the data from Joe, and got the FX to work stand-alone. Then we re-incorporated the effect into the demo, and sequence it in.

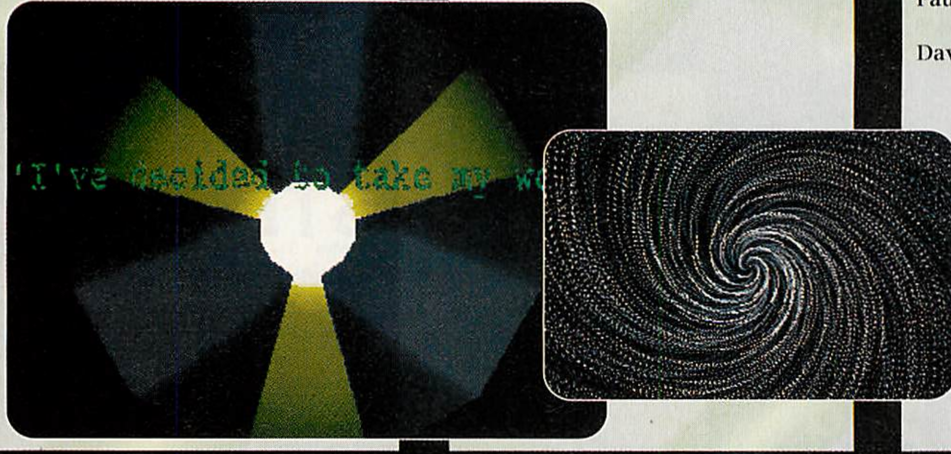
Paul: *How does the future look for the scene?*

David: I think that the Acorn demo scene has the brightest future of all the Acorn scenes, since now that Acorn is no longer offering official support, the platform becomes open for more and more risky hardware tricks, and even more optimised routines. Since the demo scene is unpaid, and for fun anyway, Acorn's closure can't be a bad thing for it. I'd imagine that there will be quite a few more competitions such as Evolution, and I'll certainly keep coding (as time allows). It's now just a case of evolving the formula to the next level.

Paul: *What are your plans for the future?*

David: Immediate future for me is finishing of the graphics engine, and getting the player sorted (Realtime mixing desk). Joe is working on a number of projects with VOTI and some other people. That should mean some software to look out for.

The demo scene is as much a culture as anything else – a way of two crews going head to head and battling it out in attitude, code, graphics and sound. That essence of competitiveness won't die.

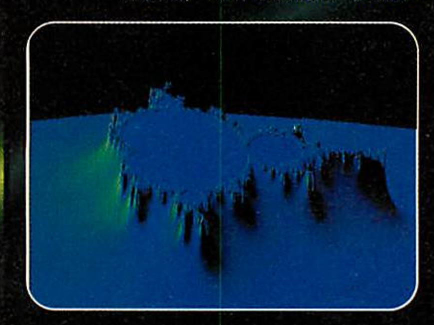


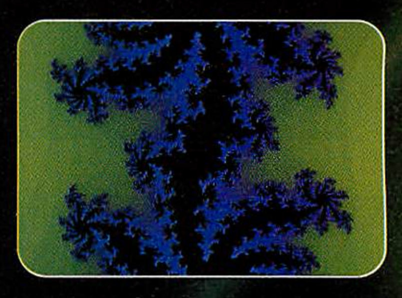
Arm's Tech

French coder Frederic Elisei (aka ARMoric of Arm's Tech) has been a regular on the demo scene for many years. As well as constantly producing innovative demo effects, he also runs the Acorn Demo pages. Although unable to contribute to the Evolution competition, Frederic has included a fantastic collection of unreleased sources and mini demo FX in the techie section of the CD.

Paul: *Why do demo teams use pretentious names?*

Frederic: Well, I suppose this question doesn't apply to us. Our name was chosen because it was both serious and funny: Arm Steak (some nurture for our processor), Tech(nical) as well as the greek-based suffix "-teque" found in French words like 'bibliotheque'. As for demos, our released demos were all built around the name, and I have a reserve of stupid names, like *SillyCone*, for possible future releases, in the form of empty directories – with bad-taste home-made !Sprites. Surely, I missed the chance to be infamous, by not spreading all those horrors (yet).





Paul: *How did you start off writing demos?*

Frederic: It was the A3000. With previous machines (I owned an Oric-1, with 6502, then a CPC with Z80), I liked graphics and tried to write games, but very few were finished. With the ARM and the Basic, it was easy to code something – at that time, with RISC OS 2 and no HD, after an crash/error just shift-reset, type *BASIC then OLD and the source was back. To sum-up, writing demos is the coding pleasure rewarded with visual things,

without the need for long work.

Paul: *What makes the best demo?*

Frederic: When you want to see it again. And again. Because you can't believe all that can be done that fast and that nice.

Paul: *What's the most important to you, presentation or clever coding?*

Frederic: I prefer clever coding, with new things (even bad coded) rather than good coded classical things – where you can plot two polygons/second more than the neighbour. But I like a scenario with humour (like the Christmas 97 demo). Myself I prefer to spare the few percents of CPU necessary to play music to gain some frame-rate...

Paul: *What next for Arm's Tech?*

Frederic: Maybe I'm too old or older than others, as I will have to seek a job soon. As happened with ArcAngels, BIA, ArcEmpire or Sick... But before giving up the fight to keep funny using a computer (and no doubt it can only be an ARM based one), I'll try to write a time generator, so I can code with demos again! Hey, you emulators freaks, can't you write a time emulator and let me back to the past :)

Nutters

Having won the Revelation 97 competition with their first release, the Nutters are one of the most influential teams on the Acorn scene. Putting presentation as well as quality coding to the fore the Nutters have again produced an excellent demo for Evolution.

Paul: *What first inspired you to start coding demos?*

Chris: I think it was watching all of the early demos that inspired us, although we spent a couple of years messing about with routines and not actually doing anything productive. Once we saw Revelation '97 was going to happen, we decided that we were going to write a demo and that's how *Fluoro* came about.

Paul: *What factors make the best demo?*

Marcus: The whole idea of a demo is to produce an overall package which impresses the viewer. If you've only got the routines, people are always going to be left thinking that it could have been so much more. After all, demos are becoming so much like music videos these days.

Chris: I think the key is to have a good balance between presentation and coding, so the routines look like they were meant to fit together and the demo flows.

Paul: *What influences your demo designs?*

Alex: Certainly for Zero, we took visual cues from TV shows like Board Stupid, as well as MTV presentation and videos by dance music pioneers Coldcut. Demo music on the Acorn also seems to be somewhat neglected. That's why we've tried to be fairly eclectic and do something different. Zero's music was influenced by drum'n'bass producers like Peshay and Goldie, as well as the fantastic hip-hop artist DJ Shadow.

Paul: *How do you go about creating a demo from start to finish?*

Chris: I tend to start by messing about with various building block type routines that could be used to make a demo, such as sprite plotters and polygon engines. We then get together and thrash about with ideas for how the demo will look and try and design routines around the framework of code we've already got. At this stage the demo is story-boarded and we set about putting it all together.

Alex: We took some of the criticism of Fluoro to heart and this time round tried to come up with a demo that really flows, and links well to the music. You can't just knock up a few routines and play the music in the background these days. Everything has to be timed and synchronised to the music for maximum effect.

Paul: *How important is Evolution?*

Chris: I think this is a landmark in the Acorn demo scene as I believe it is going to produce a lot of good entries, but I think it's a real shame that Acorn World was cancelled and so hasn't given us the opportunity to should the whole of the Acorn world what are little niche is all about. Hopefully this competition will inspire more coders to start writing demos and so next year the event will be even bigger.

Alex: I think this will be a great chance for demo coders to really show off their skills. Now the Risc PC has such a powerful processor (the StrongARM), Acorn demo coders can now finally start writing routines that have been the preserve of PC demos for ages, like meta-balls (blobby objects) which we finally managed to do in Zero. It was also fantastic to see the whole scene come together to solve the problems we had when Revelation was cancelled. I hope this is the start of something bigger.



Paul: *What are your plans for the future?*

Chris: We have no great plans for the future, but we're looking around at what's going on in other demo scenes. One thing that we've recently become interested in is Java demos. These demos run in most web browsers and so are completely platform-independent and give potential for a much larger audience. We're not sure where we're heading, but I'm sure you'll hear from us again.

The Writing of Demos

Paul Wheatley gives his views on the crucial aspects of demo production

The demo scene can very broadly be split into two main groups – the people who create the demos and the people who watch them. Demo coding requires a lot of time and effort and despite the fact that most people who own a computer are intrigued to see what kind of impressive stuff their machine can do, very few actually write demos.

But whichever group you come from, demo watching is an essential pastime for those involved. Most demo writers start off by seeing other people's demos and gradually get drawn into producing their own. It's a very addictive pastime and is, in effect, a long running competition to make the best use of the hardware platform at your disposal. Can you make your demo go faster, use more polygons and have more style than anyone else? Demo watching is the first step to becoming a demo junkie...

The Team

Demos are a fusion of creative work from three main areas: code, graphics and music. Constructing a production that involves work in such a wide range of areas is very ambitious to undertake as a lone demo writer. For this reason, many demos on the scene are written by teams. As well as providing an identity around which to base the style and content of the production, working within a group allows invaluable interaction between the members who can analyse, discuss and hone a demo design into an impressive production.

As in the world of business, a company recruits experts in specific fields who work together to produce the companies' products. A demo team works in exactly the same way. In most cases this usually means having individual coders, artists and musicians who are specialists in their own fields. It's important to remember that a demo is an integrated production. The best demos have FX, music and graphics that all fit together.

In its simplest form this can be something as simply linking events in the display to the music. But this can also be taken much further to create a whole style and feel to the demo which is produced when the main elements come together and create far more than the sum of their parts. To reach this level requires a lot of cooperation and communication between the members of the demo team.

Starting off

In the digital age of Internet communications many demo teams have never met in person, but communicate daily via the Internet. The Net is also a great forum for discussion with other demo teams, whether you're talking about the latest release on the scene or simply asking just how that amazing effect in their last demo worked at such a fast frame rate. If you're looking to get involved in the scene, the various web sites and news groups are the first place to start.

A good way to learn the ropes is to join an existing demo crew or at least talk to them for advice. Most demo writers are more than willing to recruit new team members or discuss demos, especially by e-mail or on the newsgroups. If you want to start up a team, you'll need to advertise for members. Again the Net is a good place to start.

There's a lot to learn from existing demos, both in terms of watching the productions to pick up tips on design and from a more technical aspect with released source code. This month's cover CD contains a techie section with loads of source code for demo FX from demo-writing masters like Frederic Elisei and Paul Thompson. There's also a wide

Origins

I originally got hooked on the demo scene after watching some rather stunning productions on the Amiga and Acorn way back in the early 90s. In its day the Amiga was an ideal demo platform. It provided me with a lot of the inspiration to get into the demo game. Watching demos, trying to work out how they were performing seemingly impossible FX at impressive frame rates, and re-creating them in your own code and adding your own spin. Even better was the challenge of creating your own FX. If you were lucky, other demo writers would check your work and take your idea further with their own optimisations in their next demo. In effect, stealing is the highest form of flattery.

Common music links

Hits	The most obvious and frequently used link point in music is a hit which is often timed to a sharp cut between FX or a flash up on the screen.
Strings	A more gentle part in the music can be effectively echoed in the demo with a laid back effect. A pause in the drums for a few patterns with some nice strings playing can link very well to slow moving effect on screen.
Breakdown	A funky breakdown mid way through a song is ideal to time to your fastest effect. Flying through a 3D world, or an effect that uses rapid movement works well here.
Sound FX	Rather than choosing FX to suit the music, add sound FX to the soundtrack to suit the demo. Voice samples, real world sound effects – the limit is your imagination. However, remember to make it fit the theme and feel of your demo.

range of programming guides on the net, with source code for 3D routines and demo FX.

Writing a demo

So now you've got a team together and you're ready to write a demo. Where do you go from here? The rest of this article describes the key elements of a demo and the important factors to consider as part of it's design. I'm not going to go into the technical aspects of the actual demo coding, which Paul Thompson talks about that elsewhere in this demo section of the magazine.

It's important to begin work with a design for your demo. Experienced teams can go as far as story boarding each part of the design before they even start coding, but as long as you plan through the basic flow of the demo you're not going to have too many problems. Try and come up with an overall theme for your demo.

Avoid mismatched styles and attempt to tie in each part of the demo. Transitions from one effect to another are crucial in modern demos. If executed properly, transitions build your demo into a flowing production rather than a sequence of separate parts that have been tagged together. A good initial design will go a long way toward making this work easier when it comes to coding the demo.

Production quality is important in any demo. Attention to detail is crucial for a production which is going to be picked apart by other demo writers once it's released. Take time to fix little glitches, position those titles exactly in the middle of the screen and make your demo a polished production.

Music

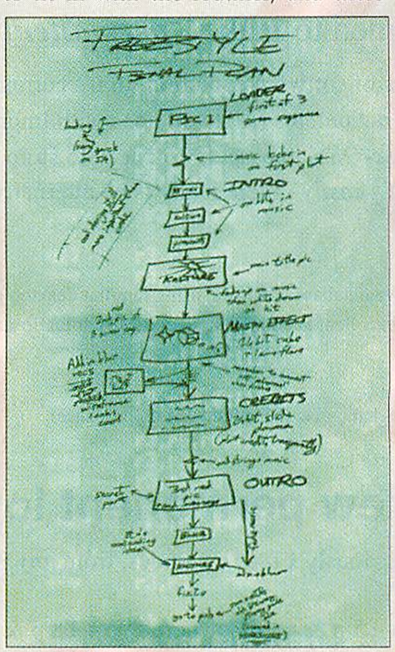
The soundtrack of a demo is often overlooked by demo writers as something to tag on at the end without really considering it's importance as part of the complete demo design. This really is missing out on a great opportunity as the music can tie the whole production together and give it the flow and impact required. With no music at all, demos can seem slow and boring – turn your speakers off while watching your favourite demo production to see what I mean.

Ideally the music for a demo should be produced alongside the demo itself, and is likely to undergo many revisions to fit in with the demo design. This is often difficult to manage and an alternative is to start off with the music track and design the demo to fit in with the various parts of the music. Produce a timeline of critical parts of the music. Hits, changes in style and particular sounds that stand out should all be noted. You can then model the transitions and important events in the demo to fit in with these moments.

Musical style is also very important. Demos feature cutting edge graphical FX and many teams use a cutting edge sound to go with it. Drum'n'bass or hip-hop fit in very well with a stylish production, but they aren't the only choices. A live instrument sound is often very effective in what you're expecting to be a digital, electronic, programmed environment. You could even go for that old school demo music sound which you can hear in *Mobius* on the cover CD.

Graphics

3D graphics have taken over demos to a large extent in recent years expanding the role of the graphics artist to a 3D modeller, texture map designer and 2D bitmap artist. All these roles are vitally important however. Demos are not just about cool coding, and without quality graphics to back them up, good routines on their own are not enough to do the job. It's the coders job to ask the artist for the textures and models they need to fit in with the routines, and these requirements should be laid down early on as part of the design.



The scribbled demo plan for Kulture's *Freestyle* demo written in three days before the Revelation 97 demo competition

2D bitmaps are not as important in modern demos as they were a couple of years ago, but they still make a feature. With 24 bit colour and high resolutions on offer, the graphic artist has no limits to picture design and they can use this opportunity to show off their skills at digital drawing and produce impressive full screen pictures to show during the demo. Pictures can form title screens, loading screens or backgrounds to other FX. As an example environment mapping allows you to show a quality picture in the background and see it reflected from a 3D object in the foreground.

Back to the beginning

Starting off on the demo scene is only difficult if you're too ambitious. For your first demo production, keep it small. Go for a little intro with only a couple of FX, but really work hard on what you do produce. A short but polished demo is much better than a long and badly designed one.

If you don't have your own team but you want to work on demos, decide on a speciality (usually as a coder, graphics artist or musician) and get talking to other demo groups. Either convince a team to take you on as a member, or advertise for other members to form your own group. If you can create artwork or craft a soundtrack there will be someone out there who'll want to take you on.

Scene glossary

Demo	A rolling sequence of code, graphics and music that shows off the demo writers' skills and the power of the computer that the demo runs on.
Intro	Small demo with a limited number of FX. Often fits in a very small file size, typically 64k (hence the 64k-tro).
FX	The main content of a demo. FX are the individual real time displays which are put together to produce the running sequence of the demo.
Graphician	Perhaps a more general term than artist which usually implies creating traditional 2D images. The graphician's job within a demo team may involve ray tracing, sprite drawing or the design of 3D objects or worlds for real time manipulation.
Lamer	Rather harsh term used by hardcore demo writers for people with no demo skills or understanding of the scene.

Demoing on the net

Acorn Demos Site
http://www-vis.imag.fr/AcornDemos/
PT's demo site
http://www.dcs.ed.ac.uk/~pat/dfi.html
Compact but Bijou
http://www.ndirect.co.uk/~mrdalliard/
Acorn Arcade
http://www.acornarcade.com
Network
http://www.scene-central.com/
Megumi
http://www.os.rim.or.jp/~sira-m/megumi.html

The art of demo writing

Paul Thomson of DFI provides help in the demo-coding scheme

The demo coder, perhaps even more so than the games programmer, is regarded by knowledgeable popular culture to be the pinnacle of their genre; the master of their discipline, infallible, a genius. Well, as such, you might expect me to say that, but many a team would have you believe it is so. The truth, as always, is somewhat different.

The origins of this delusion trace their roots back to the mid 1980's, when demo writing first became popular on machines such as the Atari ST, the Commodore 64 & Amiga. The relative power of these machines restricted the complexity and detail of the first demos, yet the open architectures made it possible for the programmer to exploit the hardware, produce the seemingly impossible, and surprise even the manufacturers with their achievements. The resulting audio-visual experience, though often completely pointless, was always entertaining, and so the demo fan was born.

Times change however, and modern demos now receive criticism for being merely neon-signs to attract fee-paying games manufacturers, failing to reproduce the magic of their older counterparts. The effects commonly centre on 3D routines that, while not looking out of place in a modern arcade, are no more revolutionary than the pre-rendered trailers accompanying most PC games. The gap between the demo coder and the cottage industry games producers of the time has inverted; multi-national producers with years of man-time to spend regularly upstage all but the very best demos.

So what is the trick to reclaim the original charm of demos? Can we return to the *good old days* of hardcore coding? Certain things will stand in our way – enforced interplatform compatibility for one. When writing to the bare metal, programmers are tempted to directly address specific hardware – poke values into the video controller registers to alter screen attributes for example. As any computer science lecturer will tell you, this is Beelzebub's own special way of programming, and must only be attempted by those with a dangerous disregard for the safety of others, and a personal affiliation with the dark one. It's a common reason for Archimedes games to fail on Risc PC hardware.

Without resorting to such Satanic techniques, what other prerequisites for a hardcore demo exist? Certainly it must all be written in assembler – no self-respecting demo coder could write in anything less. Well, that is unless he found a decent compiler. The *old skool* machines really needed to be programmed in their native language to get the very best from them, and even if compilers existed, they were neither common nor affordable.

The old argument about compilers producing better code than human programmers certainly didn't hold true for the demo coder – they laughed at the compiler's futile optimisation attempts. Modern demo writers, and compilers, are different however. The majority of recent demos are at least partially written in higher level languages, with only the very core written in high-performance assembler. Writing the entire demo in assembler would offer little benefit, and take twice as long.

Further problems appear when you consider the power of modern computers. With graphics now quite indistinguishable from photography, processing speeds hundreds of times faster than the mighty BBC B, and viewers used to MPEG video, the demo coder has to write some seriously award-winning code to impress anyone. Code that would not look out of place in the hallowed pages of a SigGraph publication, for instance. To really get noticed the code has to do something revolutionary, bringing me back to the first point about demo coders genius.

So what should the hardcore demo writer do? What they have always done: stay one step ahead. The remainder of this text describes two ways recent demo writers have shown the way forward.

Free direction tunnels

Tunnels? How dull. How about tunnels you can distort the shape of, view from any angle, overlap and twist? So flexible, a whole game could be designed around the one routine. Figure I shows such a tunnel, a snapshot taken from the new DFI demo, *k2*.

Traditional static tunnels, such as those featured in the demo *Blu* by the Xperience, are being superseded by dynamically manipulated free form routines, the best example of which can be seen in Reisnac by Icebird. The technique is a good example of how a seemingly daft concept can be optimised into a slick routine: the tunnels are drawn using a ray tracer.

Ray tracing, as if you didn't already know, is a vastly involved method of plotting photo-realistic images by applying the laws of physics to each light ray passing through a scene and the viewing camera lens.

Obviously, the amount of physics refraction/reflection calculations we can perform in a fraction of a second will inhibit our systems performance,



Figure I: The free direction tunnel

and as each pixel on the screen should Δhave its own ray of light, we already appear over ambitious.

In reality, and as we'll see a little later, we need apply no reflection or refraction equation, and only the simplest of object intersection calculations, to plot a tunnel. Firstly though, the basics.

As mentioned above, ray tracers examine the behaviour of light rays in order to plot a realistic image. More specifically, the light rays are traced for each screen pixel, back through the scene, to their origins. For our needs, we shall be content with finding the first intersection these rays make, with the only object in the scene – the tunnel.

For our purposes, a ray of light can be considered as a straight line, having an origin and a direction. Mathematically speaking, each three dimensional vector point on the line, (x,y,z), satisfies the following vector equation:

$$\begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} ox \\ oy \\ oz \end{bmatrix} + T * \begin{bmatrix} dx \\ dy \\ dz \end{bmatrix}$$

Where (ox,oy,oz) are the origin of the vector, (dx,dy,dz) the three dimensional direction vector and T the distance along the line.

Each screen pixel has an identical origin coordinate, considered to be the viewer's eye, but a different ray direction. One point certain to be on the ray, is the screen pixel, (sx,sy), the ray passes through on the way to the scene objects. For simplicity's sake, I'll set the origin vector to be:

$$\begin{bmatrix} ox \\ oy \\ oz \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ -256 \end{bmatrix}$$

and all points on the screen to be:

$$\begin{bmatrix} sx \\ sy \\ 0 \end{bmatrix}$$

where

```
-width/2 <= sx < width/2
```

and

```
-height/2 <= sy < height/2
```

which means that sx=sy=0 is the centre of the screen, not the top left so the eye is a certain distance behind (negative Z coordinate) the screen, which is at Z coordinate zero. The direction vector for a ray passing through screen pixel (sx,sy) can be simply calculated by using the original line equation:

$$\begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} ox \\ oy \\ oz \end{bmatrix} + T * \begin{bmatrix} dx \\ dy \\ dz \end{bmatrix}$$

As the length units for T were unspecified, indeed unimportant, we can set T to equal 1, that is for a given ray, one step along the line moves to the screen:

$$\begin{bmatrix} sx \\ sy \\ 0 \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ -256 \end{bmatrix} + \begin{bmatrix} dx \\ dy \\ dz \end{bmatrix}$$

so:

```
dx = sx
dy = sy
dz = -256
```

The remainder of the maths will assume the length of the direction vector is equal to 1. To do this, we apply the following standard grade procedure:

```
r_length = 1/sqrt( sx * sx + sy
* sy + -256 * -256 )
dx =    sx * r_length
dy =    sy * r_length
dz = -256 * r_length
```

Now we know the direction of rays through pixels on the screen, we are free to rotate them as we please, to achieve the goal of free direction tunnels. The origin can also be modified to move around within the tunnel. See any text book on geometry for the rotation maths.

All we need now, to find where our ray intersects the tunnel, is to find the length along the line, the value of T, required for the intersection to occur. For this, we'll need a model of the tunnel itself, a model such as Figure II.

Tunnels can be thought of as a set of circles lying perpendicular to a straight line. We could fix this straight line to be the same direction as the Z axis, so each circle exists on a plane with a constant Z coordinate. The equation of a circle is simply all points x,y that satisfy:

```
( x – centre_x )² + ( y –
centre_y )² = radius²
```

We know the centre_x and y will be on the Z axis, and thus equal to 0, so this immediately becomes:

```
x² + y² = radius²
```

Substituting our original line equation into this, we get:

```
( ox + t*dx )² + ( oy + t*dy )²
= radius²
```

Multiplying this out and rearranging:

```
ox*ox + 2*ox*t*dx + t*t*dx*dx +
oy*oy + 2*oy*t*dy + t*t+dy*dy
= radius²
(dx*dx + dy*dy) * t² + (2*ox*dx
+ 2*oy*dy) * t + ox*ox+oy*oy-
radius² = 0
```

...or a quadratic equation for t, solvable by the standard quadratic

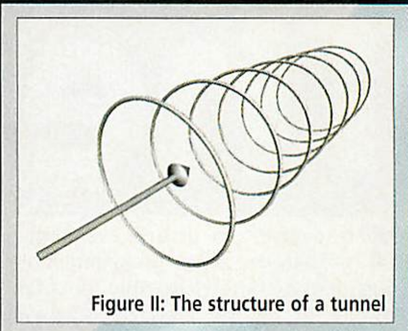


Figure II: The structure of a tunnel

equation solver:

$$t = \frac{-b \pm sqrt(\ b*b - 4*a*c\ )}{2*a}$$

where:

```
a = dx*dx + dy*dy
b = 2*(ox*dx + oy*dy)
c = ox*ox+oy*oy-radius²
```

The smallest root (from the ±) is the closest intersection point, and the one we need. If no roots exist (a=0 or b*b-4*a*c < 0) we're probably shooting a ray right down the centre of the tunnel and can set that screen pixel to black automatically.

Now we have a value for t, we can work out the intersection coordinate from the line equation:

```
x = ox + t*dx
y = oy + t*dy
z = oz + t*dz
```

Some trigonometry can then calculate the texture coordinates from these by:

```
texture_u = z * u_scale
texture_v = polar_angle(y,x) *
v_scale
```

and the colour copied from our attractive texture sprite to the screen memory.

For those of you not considering writing this routine using the floating point emulator, polar_angle(y,x) can be defined as:

```
polar_angle(y,x) {
if x=0 then
  if y>0 angle=PI/2 else
angle=-PI/2
else
  angle = arc_tangent(y/x)
  if x<0 angle=angle-PI
endif
} = angle
```

For additional realism, the difference between the z coordinate and the origin_z coordinate can be used to apply a realistic depth cue fade.

Doing it quickly

If you implemented the above algorithm you might be disappointed to find it very slow. Multiple square roots and trigonometric calculations per pixel will never execute rapidly on

a non-FP computer such as the standard Acorn. Two things can be done to improve the speed:

Firstly, we need not calculate accurate texture coordinate for every pixel on the screen. Since tunnels are regularly shaped objects, calculating the full accuracy coordinate every eight or so pixels and interpolating the rest will give almost indistinguishable results. The process could be programmed as:

```
REM Calculate accurate table
for sy = -height/2 to height/2+8
step 8
  for sx = -width/2 to
width/2+8 step 8
    table[ height/16+sx/8,
width/16+sy/8 ] =
accurate_calculate(sx,sy)
  next
next

REM Plot tunnel
for sy = 0 to height
  for sx = 0 to width
     u_00 = table[ sx/8, sy/8 ]
     u_10 = table[ sx/8 + 1,
sy/8 ]
     u_01 = table[ sx/8, sy/8 +
1 ]
     u_11 = table[ sx/8 + 1,
sy/8 + 1]

     REM Interpolate
     u_0 = u_00 + (u_01-u_00) *
(sy MOD 8)/8
     u_1 = u_10 + (u_11-u_10) *
(sy MOD 8)/8
     u = u_0 + (u_1-u_0) * (sx
MOD 8)/8

     REM Repeat above for 'v'
coordinates
     screen(sx,sy) =
texture(u,v)
    next
next
```

Second, and more importantly, some of the complex calculations could be re-implemented using lookup tables. Starting with the ray direction vector for each accurate calculation. As these are invariant on rotation and origin displacement, they can be safely pre-calculated into a table:

```
REM Pre calculate ray direction
table
for sy = -height/2 to height/2+8
step 8
  for sx = -width/2 to
width/2+8 step 8
    r_length = 1/sqrt( sx*sx +
sy*sy + 65536 )
    dx =    sx * r_length
    dy =    sy * r_length
    dz = -256 * r_length
    table[ height/16+sx/8,
width/16+sy/8 ] = [dx,dy,dz]
  next
next
```

The other major calculation involves many arithmetic operations, a square root and a polar angle. If we are prepared to sacrifice freedom of movement within the tunnel, and fix our origin coordinates to those on the Z-axis, we can pre-process all these operations into a single lookup table.

Consider again the above tunnel intersection calculation. If we set the values of ox and oy to zero, the quadratic coefficients become:

$$a = dx*dx + dy*dy$$
$$b = 2*(0*dx + 0*dy) \quad = 0$$
$$c = 0*0+0*0-radius^2 \quad = -radius^2$$

And therefore the root of the quadratic depends only on the values for dx, dy and the constant radius. We know the range of values for dx and dy are fairly small as, with the variable dz, they form a unit length vector. The lookup tables should therefore contain values of u and v for all possible dx and dy's.

The function **accurate_calculate** in the above code can simply use the first lookup table to find the values of dx and dy, and read the corresponding values of **u** and **v** from the second lookup table. With efficient use of lookup tables and good programming, the tunnel can be plotted at full frame rate, over 50 frames a second, on a StrongARM powered computer.

Real time meta-balls

Another effect recently added to the demo coders repertoire, is the real time rendering of the blobby objects shown in Figure III. This effect became common in PC demos a year or so ago, but has only recently appeared on the Acorn platform, in the demos *Zero*, by the Nutters, and *K2* by DFI. Technically, this is a far more complex routine than the tunnel plotter described above, and shall therefore be discussed only briefly here.

Anyone that has seen the 2D bump mapped blobs in the demo *Era* by the Xperience, will quickly recognise the extension into 3D made by meta-balls: several distinct objects freely melt into

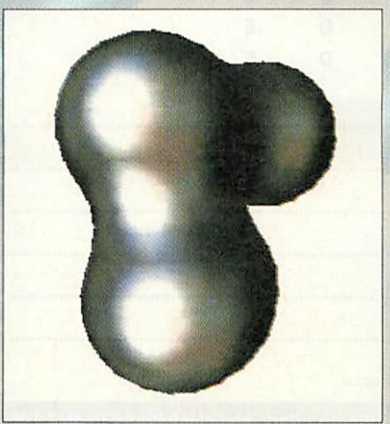


Figure III: Meta-ball renderings

each other in a pleasing way reminiscent of water or liquid mercury.

This merging of objects is achieved by using a field intensity equation, centred on each separate object. The term meta-balls is one particular form of this equation, and is actually a slight misnomer – the equation typically used by these routines is a simpler form called the soft object field equation. The actual equation is:

Intensity(r) =

$$1 - \frac{4*r^6}{9*q^6} + \frac{17*r^4}{9*q^4} - \frac{22*r^2}{9*q^2}$$

where **r** is the cartesian distance to blob centre from sample point and **q** is the constant radius of the blob in question

Quick witted readers will notice the reason this form is used: the calculation of **r** requires a square root, but each use of '**r** is taken to an even positive power, so the root need never be calculated. The factors involving **q** are constant for any blob and can therefore be pre-processed away, making the computation of this equation reasonably fast.

The field intensity for any given point in the view volume can be calculated by summing the individual blobs contribution. Where the intensity breaches a pre-set threshold value, the surface of the blobs is drawn.

The rendering of this *blob volume* is most typically done by a graphics procedure called the *marching cubes algorithm*. Insufficient room prevents me describing this in more than the briefest detail, but a very good description may be found in the book *Advanced Animation and Rendering Techniques* by Alan and Mark Watt.

In essence, the marching cubes algorithm calculates a set of triangles that approximate a surface described by any field intensity equation. It does this by calculating the intensity for a regular array of samples, covering the extremities of the blobs, determining which regions will require triangles, and finally using a lookup table to produce the correct triangle set.

The future

The good old days of writing demos may be gone, 20 hour scrolltext marathons no longer avidly read to their end, star fields no longer the exciting sparkle they once did. The scene has grown up, but the standard of programming necessary to make an impact still presents a challenge to anyone wishing to devote their spare time to a rewarding and fascinating discipline. While you may never be recognised in Tesco with your shades on, the SigGraph conferences may one day welcome you with open arms.

Evolution Demo Competition

Vantage Prize Draw

Submitting an entry form to vote in the demo competition and answering the prize draw question enters you for the prize draw to win a copy of Cerilica *Vantage*.

Cerilica *Vantage* is the most advanced vector graphics application available on any platform for the price and will allow you to create fantastic images.

The first national Acorn Demo competition is here, and you the reader have the chance to vote for the winning entry and enter the prize draw to win a copy of the amazing new vector drawing package Cerilica *Vantage* worth £200.

All you have to do is watch the demo entries on this month's cover CD and vote for the best one. For the real demo fanatics you can optionally vote for the Best Coder, Best Musician, Best Producer and Best Artist. To take part, simply fill in the form below and mail it to the competition address.

This is a chance to express your views on the demo scene. What makes the best demo? Clever coding? Stylish Design? A thumping soundtrack?

Best demo

The main award goes to the best overall demo in the competition:

A	**Eden**	Divine Nature
B	**k2**	DFI
C	**Mobius**	Kulture
D	**Reactivity**	Reactive
E	**Zero**	Nutters

Best coder (optional)

Voting should be based on the quality and speed of the coded effects produced by the programmer.

A	**Chris**	Nutters
B	**David**	Reactive
C	**PT**	DFI
D	**Stu**	Kulture
E	**Xyra**	Divine Nature

Best musician (optional)

This category features the musicians who worked on the entries for Evolution.

A	**Amberphene**	DFI
B	**Exel**	Kulture
C	**David**	Reactive
D	**knackeredAmp**	Divine Nature
E	**Marcus**	Nutters

Best producer (optional)

The production work on a demo incorporates ITS design, flow and styling, and this award goes to the producer who did the best work in these areas.

A	**JAB**	Reactive
B	**Alex**	Nutters
C	**Paul**	Kulture
D	**PT**	DFI
E	**Xyra**	Divine Nature

Best artist (optional)

This category highlights the creators of the best bitmap and 3D artwork.

A	**JAB**	Reactive
B	**Marcus**	Nutters
C	**Paul**	Kulture
D	**PT**	DFI
E	**Xyra**	Divine Nature

Evolution Demo Competition Entry Form

To take part in the prize draw to win a copy of Cerilica Vantage answer this question:

What sort of graphics does Vantage manipulate? ______________

Best demo:	A	B	C	D	E
Best code (optional):	A	B	C	D	E
Best musician (optional):	A	B	C	D	E
Best producer (optional):	A	B	C	D	E
Best artist (optional):	A	B	C	D	E

Name:..

Address:...

....

....

Postcode..........................Tel:..........................

E-mail:..

☐ *Tick if you do not want to receive mailings from other companies*

Send to: Evolution, Tau Press Ltd, Media House, Adlington Park, Macclesfield SK10 4NP, UK

No CD drive?

If you don't have access to a CD drive in your computer to read the cover disc, you can download the demo entries from the Acorn Arcade website at http://www.acornarcade.com or via PD library by contacting:

Five Star Marketing,
4 Shepherds Walk,
Bushey,
Herts WD2 1LZ.

6 reasons why ArgoNet are the best:-

1st Get Online Pack

This special offer gets you online for the first THREE MONTHS to ArgoNet for only £24.95 including access software, if required, for Windows, Acorn or Mac.

2nd Get Connected Pack

An award-winning pack containing external 33.6K voice/fax/data modem and access software for Windows, Acorn or Mac. With THREE MONTHS online to ArgoNet the complete pack is only £79.95.

3rd Surf at Speed Pack

Complete with external 56K voice/fax/data modem, access software for Windows, Acorn or Mac, stereo headset and THREE MONTHS online to ArgoNet. Only £109.95.

4th SuperSurfer Pack

Contains everything needed - 128K external ISDN terminal adaptor, access software for Windows, Acorn or Mac and THREE MONTHS online to ArgoNet for only £199.95.

5th Modem Trade-in Deal

ArgoNet accept any modem, working or not, in part exchange for a new external 56K voice/fax/data modem. The K56flex modem with stereo headset and lifetime guarantee is £99.95 without a trade-in or with a trade-in is only £79.95.

6th ArgoSphere for Children

ArgoSphere is ArgoNet's award-winning Web site designed for children aged 3 and older to use offline. This safe site, containing a wealth of educational activities for home and school use, can be explored FREE at www.argosphere.net.

ArgoNet Internet Services

ArgoNet's Premier Service for home and business users includes 10Mb Web space and 5 e-mail addresses. For schools, the Education Online Service includes a free school domain, unlimited Web space for your school's use and unlimited e-mail addresses.

A subscription to ArgoNet includes full use of ArgoSphere the award-winning Web site for children, unlimited access with 100% local call coverage and free phone support. Subscriptions for dial-up modem or ISDN access are available monthly, 6-monthly or annually from only £10 (exc. VAT) per month.

for the 7th call free phone:

0500 585 586

for friendly help, information and to order

winners of a BETT'98 INTERNET AWARD & PC Guide 1997 Award for THE BEST MODEM of THE YEAR



Argo Interactive Group plc,
FREEPOST PT795, Chichester, PO19 2YZ
e-mail: info@argonet.co.uk web: www.argonet.co.uk

Prices include VAT, UK carriage & packing, unless stated otherwise. E&OE

Siteseeing the web

Simon Anthony examines a website grabber

SiteSeer from R-Comp is one in a sudden rush of web site fetchers which arrive all at once after a long wait. Until now Acorn Internet web users have had to play off online time against downloading all they want from a site. You either read what you have on screen and pay the phone dues as you go or you load up as many browser windows as you can with interesting pages then take your time reading them later off-line.

This latter ploy runs a risk of the browser crashing taking with it all the costly unread pages. Granted the data itself will probably remain in bits inside the Scrap directory but even if you can find it the links won't work any more and the graphics will undoubtedly not be rendered. It is a mug's game to try and sort out that mess.

For years users of browsers on other platforms have been able to save their browser's cache and then pick it up and use it later even after the machine has been reset. There was the chance of this functionality being in the offing from Argo some time back but now that ANT and Argo are in cahoots the availability of ANT's offering will mean that Argo's will never see the light of the desktop.

For £24 odd you get the standard R-Comp sturdy A5 plastic folder, one 800k disc and one sheet of instructions (plus a registration card). The disc contains four applications: In the root are *!SiteSeer* itself and *!WebSites*. Together these two do the job of capturing, storing and sorting out the complexities of the pages. *!Websites* holds the fetched files and manipulates them so that their names can be displayed in an automatically created web page as an offline listing of the site names. *!SiteSeer* gets them there in the first place.

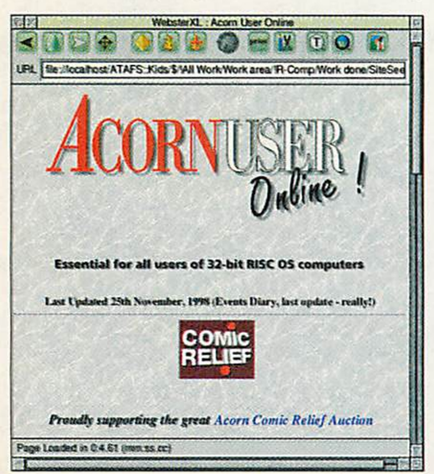


Figure I: The *Acorn User* website in offline mode

In a sub-directory on the source disc are two more apps, these are not essential to the running of *SiteSeer* but are very handy if you don't already have a utility to overcome the 77 file and 10 character limits of the current RISC OS filer. *!WebFSctrl* creates new directories with an image file structure in much the same way as the X-Files module does, in fact they share the same file type number and file structure.

The two systems can just about work together (after re-initialising them until they do) but I would advise sticking to the newer WebFS system as it is probably the more stable of the two and can also open existing X-file directories. *!WebFSctrl* (the other app) allows you to create *WebDir* files. It also includes an option to fix dead *X-file/WebDir* files, this is a very handy feature to have bundled in for free.

Figure I shows the current-at-the-time-of-writing *Acorn User* website in offline mode as loaded in to a browser from a *SiteSeer* WebFS cache. It works just like the real thing, but quicker and it's always there even when someone else is using the phone. The line at the bottom shows that this page took just over 4.5 seconds to load in to R-Comp's *WebXL* browser. Good though the new *Acorn User* site is, loading at that speed is just not possible via a standard modem.

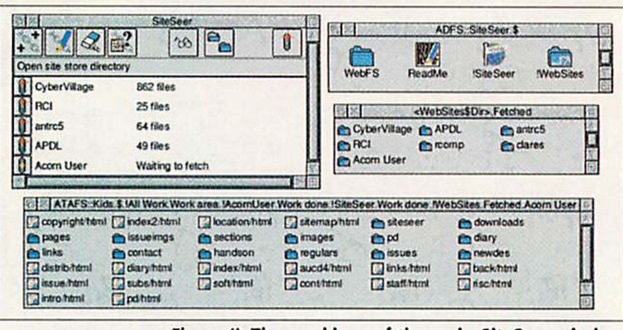
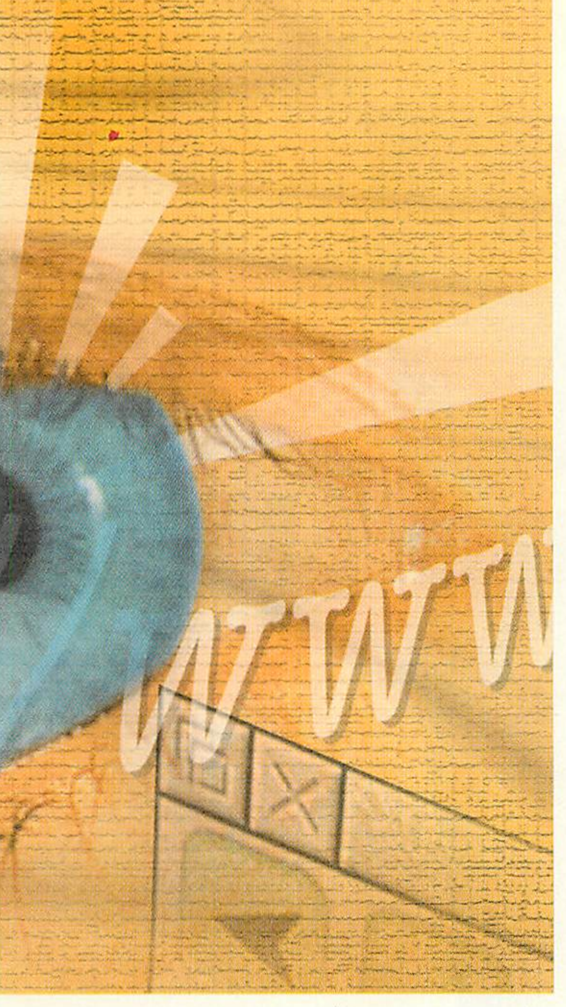


Figure II: The workings of the main *SiteSeer* window

Figure II shows the main SiteSeer window. Here icons are displayed for the following facilities, all of which are also available via menu options, from the left these are: Adding sites to a list for grabbing; editing the list; deleting it and setting its status (see Figure III later). If a site has been loaded it can be selected and then viewed by clicking on the glasses icon. To see what the fetched files look like once they have made it to your harddisc click on the two directories icon and the *<WebSites$Dir>.Fetched* directory will open, as shown in Figure II.

Above it is a shot of the contents of the original floppy disc so that you can see the icons. The bottom of Figure II shows the contents of the root of the *Acorn User* site



which uses the long filenames now possible on a computer running WebFS – an essential part of Acorn life on the Internet. That directory viewer also shows a sub-directory called *siteseer* which is put there by the app and is not part of the original site. If you get lost there is an inbuilt help facility within the main window which tells you what the icon under the pointer does. In Figure II it is shown describing the site store directory.

Figure III is what you get if you click on the Set Status icon, it is as close to being self-explanatory as everything else in the package. A few points to note though: *Non existent files* are ones which *SiteSeer* knew it had to download last time but for some reason couldn't manage to. Links to these files actually go to dummy files which are the non-existent ones which are replaced when this option is ticked.

There are a few more facilities and things to tick via the iconbar menu. This menu is not the same one you get by clicking over any of the Siteseer windows by the way. The preferences option from the iconbar is the one to claim the most attention. Figure IV shows it's most interesting part. Selections here will very much alter the speed of downloading. If you intend to have all of a site disc space can be eaten up as web sites can be huge. You can limit this by not loading any Archive files for example.

Figure III: Controlling the website fetching

Figure IV: Handling the fetching of website files

The Cybervillage site I downloaded had reached 7Mb before I aborted the process. Other options shown in Figure IV include what to do with links to other files. It would be simply daft to include all pages linked to the site you are downloading as this could mean trying to store the entire web world on one hard drive – and even the bloated drives required for PC machines can't hold that much.

So a sensible user-definable way of dealing with links is required. Ticking *include external resources* allows files which are treated as an integral part of the site to be fetched and treated the same way from the cache. *Ignore* leaves everything alone and will give you an egg timer if you click on the dead link. *Fetch* will bring in just the page which has been linked to – but no further links from it. Finally *Replace with dummy file* will bring up a you-can't-go-there faked page to kill the hourglass problem.

Figure V is seen when you are online and have told the app to do its stuff by clicking on the traffic lights or used the menu. An active download is shown as a green light, pending as amber and red means either not selected to do anything or it's already done.

The download speed is as fast as your system can handle, with no gaps while waiting for you to decide what to nab next. Up to six files at once can be dealt with. If one either gets too large or looks too dull its download can be individually aborted. If it gets stuck it can be given a kick to get the system going again – very powerful – I wish browsers could do that too. Figure V shows a lot of pictures coming through. A filter can be put on incoming files catching those larger than a specified size and those which are simply taking too long. The system will then move on to the next and leave a fake page or a gap in its place.

It may seem like a sledgehammer to crack a nut to download an entire site but remember it can be edited later if need be. Just open the file and delete the offending bits. This can be put to good use in a school situation. A teacher can pre-select a site of special interest and then comb out the unnecessary parts if any.

The site can then be accessed over a standard 'Peer to peer' network, that is one where every disc can be accessed by any other on the network and at no further cost. Any browser on the system can then get at the files as if from the live web – the users need never know the difference – an ultimate firewall. If you do trim out the less wanted areas from any fetched site and then try to use the refresh option *SiteSeer* will fill the gaps back in again unless you have the 'Update Newer' option in Figure III ticked.

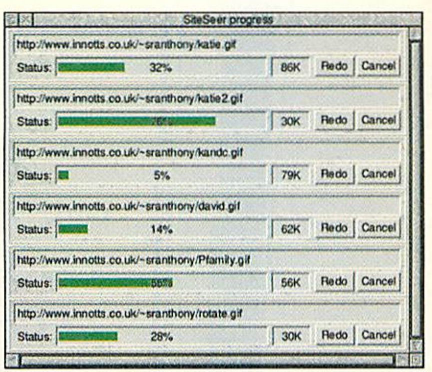


Figure V: Monitoring the website fetching

Yet another of the great advantages of using this system is that there is no disc space lost due to the file allocation unit problems associated with storing lots of small files as they are all kept as one big one with no gaps.

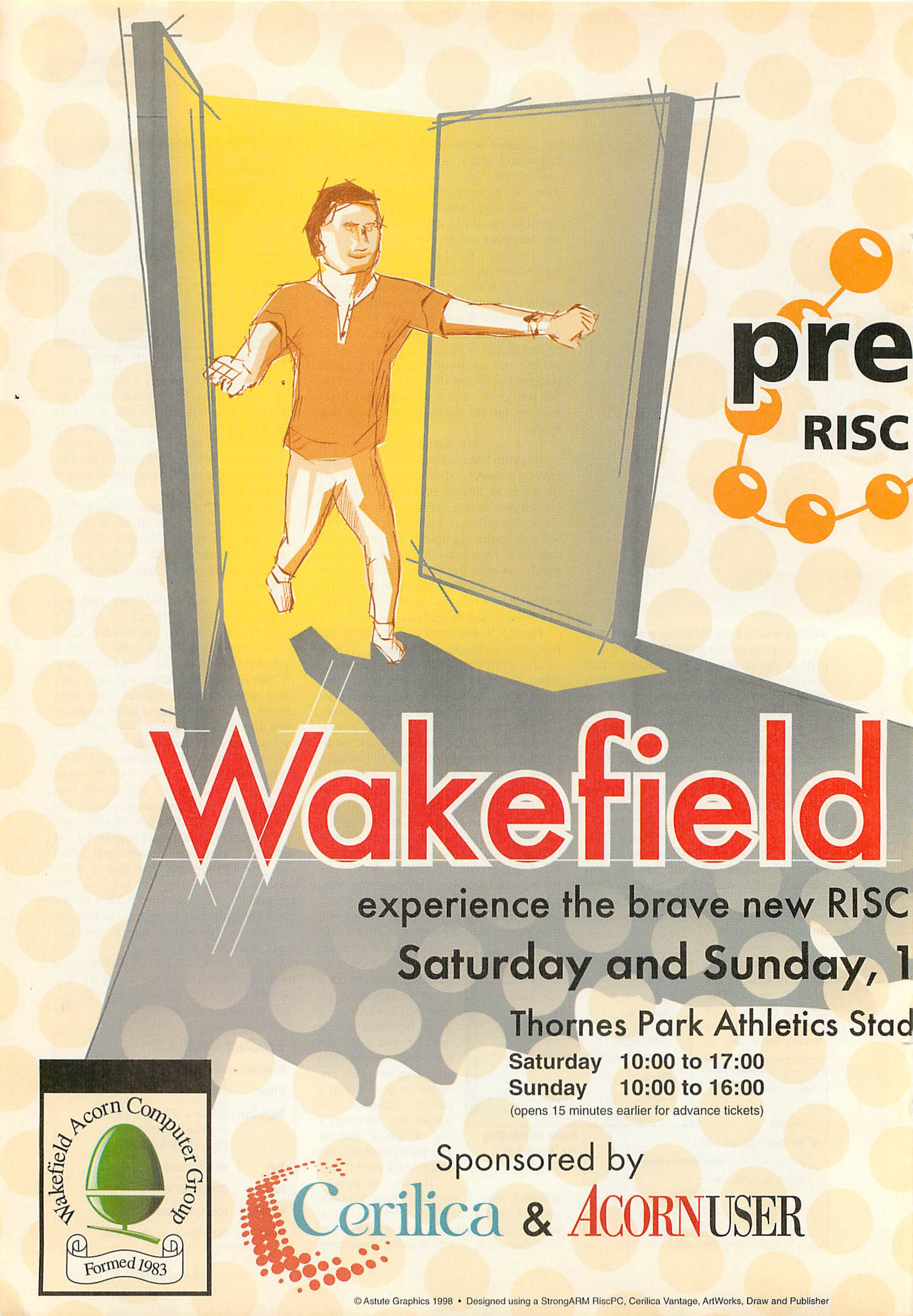
In use I found *SiteSeer* very easy and remarkably quick. But then I fell foul of a problem well known to road builders. Once you have greater space for traffic you fill it up faster. There is no way I will ever look at all 7Mb of the Cybervillage site, but I can't bring myself to kill it. On the other hand though, by using the auto-update function, once disc space has been initially swallowed by a site any alterations made by the author will overwrite the old versions and take up no more space so with luck once the cache has grown to a certain size it will start refreshing itself and not grow any larger. The problem is I keep finding new sites to pinch.

The only shortcomings I have found rest with the documentation, one sheet is not enough. R-Comp has provided a fuller version electronically as they say the application is being updated too fast for the paper version of the instructions to keep up.

There is no reason not to get this application and a lot of very very good reasons to get it quickly – I can think of nothing which should be added to it – except maybe a free 6Gb hard drive to store the offline cache. AU

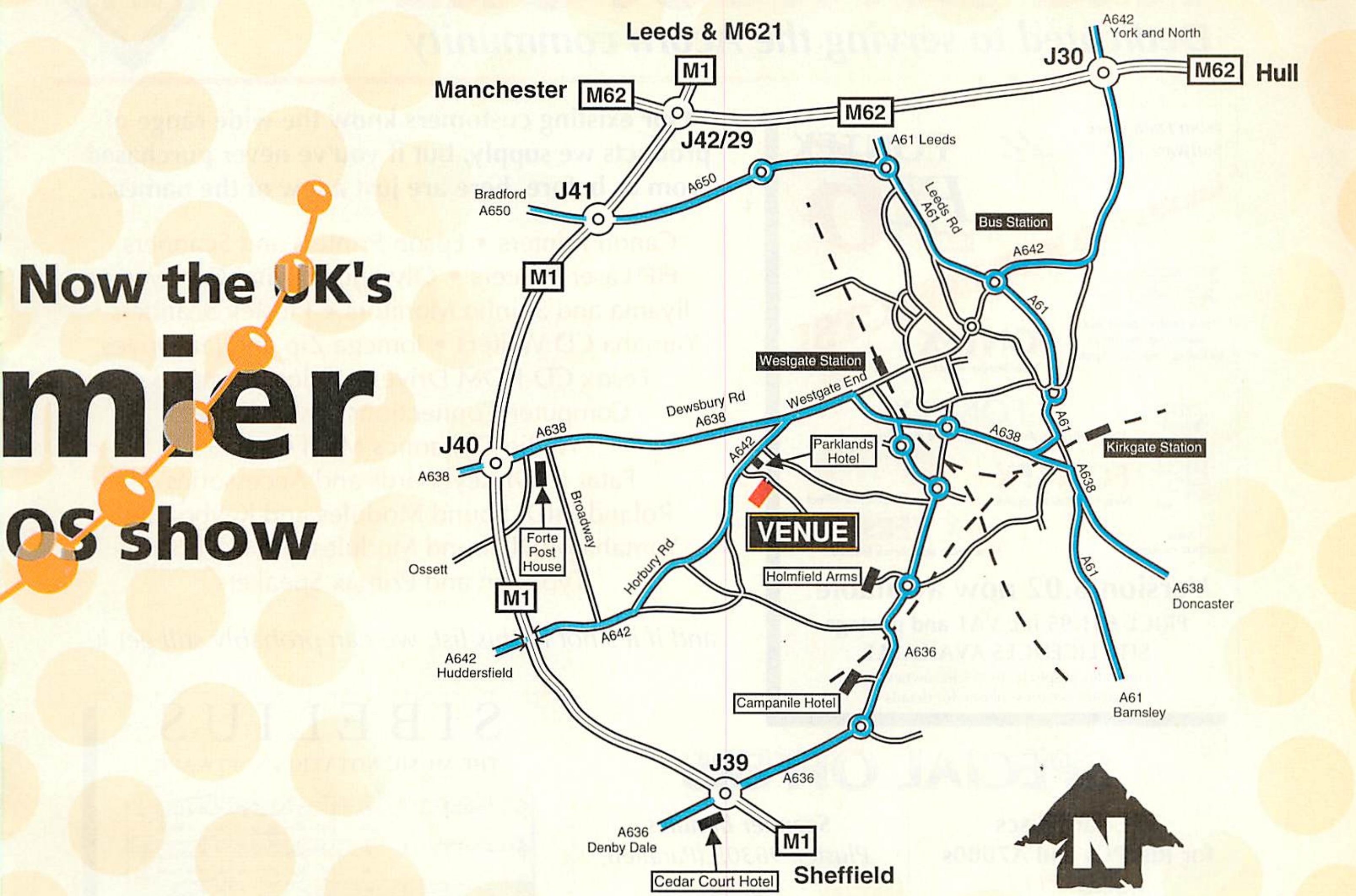
Product details

Product:	SiteSeer
Price:	£25
Supplier:	R-Comp, 22 Robert Moffat, High Leigh, Knutsford, Cheshire WA16 6PS
Tel:	01925 755043
Fax:	01925 757377
E-mail:	rcomp@rcomp.co.uk
Web:	http://www.rcomp.co.uk/



pre
RISC
Wakefield
experience the brave new RISC
Saturday and Sunday, 1
Thornes Park Athletics Stad
Saturday 10:00 to 17:00
Sunday 10:00 to 16:00
(opens 15 minutes earlier for advance tickets)
Wakefield Acorn Computer Group
Formed 1983
Sponsored by
Cerilica & ACORNUSER
© Astute Graphics 1998 • Designed using a StrongARM RiscPC, Cerilica Vantage, ArtWorks, Draw and Publisher

Easy access by road (M1 and M62) and rail.
Less than ¾ mile from Wakefield City Centre with frequent bus services passing park entrance.



Now the UK's
mier
OS show

Show 99

OS world for yourself...

5th/16th May 1999

ium, Horbury Road

Features include

The future of RISC OS
Show theatre
The official launch of Cerilica Vantage
Prize draw and charity stall

Tickets booked in advance are £2.50 for adults and £1.50 for children under 16.
Tickets may be obtained at the door for £3.50 for adults and £2.50 for children under 16.
For advance tickets, please send a cheque or postal order made payable to "WACG Show" to
Show 99 • 95 Cumbrian Way • Lupset Park • Wakefield • West Yorks. • WF2 8JT
Show organizer, telephone (01924) 379778 (evenings only)
We regret we are unable to accept credit card bookings

Free parking, catering, bar, local children's entertainment

WebSite `http://www.cybervillage.co.uk/acorn/wakefield/`

THE DATA STORE

Dedicated to serving the Acorn community





Our existing customers know the wide range of products we supply, but if you've never purchased from us before, here are just a few of the names...

Canon Printers • Epson Printers and Scanners
HP Laser Printers • Olympus Digital Cameras
Iiyama and Shinho Monitors • Plustek Scanners
Yamaha CD Writers • Iomega Zip and Jaz Drives
Eesox CD-ROM Drives • Psion Palmtops
Computer Connections 'Swap Drives'
Audio Dynamics MIDI Cards
Fatar MIDI Keyboards and Accessories
Roland MIDI Sound Modules and Keyboards
Yamaha MIDI Sound Modules and Keyboards
Typhoon and Primax Speakers

and if it's not in this list, we can probably still get it!

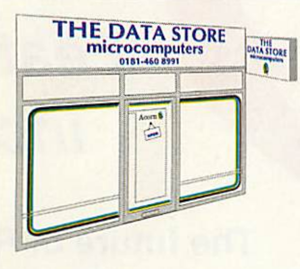
SPECIAL OFFERS

IDE hard discs for RiscPCs and A7000s
3.2GB *£115*
4.3GB *£130*
6.5GB *£159*

56k External Modems including cable
£89.00

Scanner bundles
Plustek 9630P (Parallel) *£179*
GT7000 (SCSI) *£279*
including ImageMaster/TWAIN for Acorn and separate software for Windows.
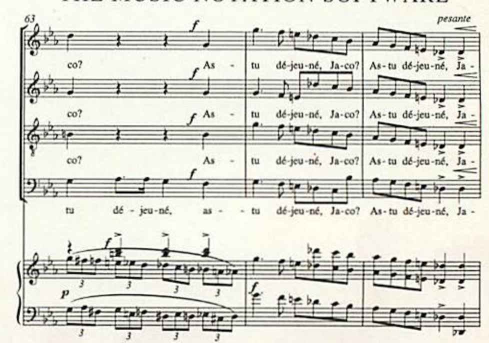
SIMM DRAM (RiscPC/A7000)
16MB *£29* 32MB *£58*



The Data Store is proud to have served the Acorn community for over 15 years, from the days of the BBC Micro and the Electron, and we remain committed to serve Acorn users for the foreseeable future. If you're in the Bromley area, just 10 miles south-east of central London, why not visit our well-equipped showroom? If not, our mail and telephone order service is second to none. *If it's made **by** Acorn or **for** Acorn, we can supply it, and at competitive prices.*
Come and join our ever-growing family of satisfied customers!

SIBELIUS

THE MUSIC NOTATION SOFTWARE



NEW LOW PRICES...

Sibelius 7	***£620***
Sibelius 7 Student	***£320***
Sibelius 6	***£105***
Optical Manuscript	***£275***

And new...

Sibelius for Windows	***£695***

The Data Store is one of the few dealers in the country which offer full, detailed demonstrations of Sibelius software. If you want to find out how the best just got better, ring us **NOW** for an appointment - you'll need at least an hour!

There are ***THOUSANDS*** of software titles available for Acorn Computers! We stock hundreds of the most popular titles on our shelves for you to browse and try, and can obtain most of the rest within a few days - so there's ***NO EXCUSE*** not to make full use of your Acorn machine ***RIGHT NOW!*** Place an order today!

OPENING HOURS

	AM	PM		AM	PM
Monday	9:30	5:30	Thursday	9:30	5:30
Tuesday	9:30	5:30	Friday	9:30	5:30
Wednesday	Closed	Closed	Saturday	9:30	5:30

6 CHATTERTON ROAD BROMLEY KENT BR2 9QN
Tel 0181-460 8991 • ***Fax*** 0181-313 0400
Web http://www.datstore.demon.co.uk/
Email info@datstore.demon.co.uk

ALL PRICES IN THIS ADVERTISEMENT INCLUDE VAT @ 17½%



Mark Moxon continues his series on RISC OS Java programming with entertaining window components

Life, the universe and Java

PART 3

This month it's away with all the boring object/class waffle and on with a whole bunch of components you can stick in your applets to make your web windows look good.

You might like to take a look at the files on the cover disc as you read this. Load the *index/html* file into your Java-savvy browser and you'll be able to see examples of the following components in action. Here goes: we're going to cover a lot of ground...

Check boxes and 'this'

Check boxes are objects of the class **Checkbox** and implement little tick boxes and their captions. Remember that because the class is **Checkbox**, we can create a new check box using the **new Checkbox()** method, which can take one of three forms:

- **new Checkbox()** constructs a check box with no label;
- **new Checkbox("Hello")** constructs a check box with the label Hello;
- **new Checkbox("Hello", true)** constructs a check box with the label Hello, initially set to ticked.

When the user clicks on a check box it is ticked or unticked automatically: you do not need to deal with that part of the interface yourself. However if you want to perform an operation when a check box is clicked, use the normal **action()** method to trap it by checking **e.target** against the name of your check box. The example program *Ex06/java* on the disc implements a set of check boxes and sets the text in a text field according to which button was clicked. Note that the text field just shows which button was last clicked, it doesn't reflect the current state of the buttons in any particular way: we'll get on to flashier examples later.

There is one thing to note about our example program: it uses panels. I'll cover panels in the next section, but first there are a few things to note about the keyword **this** that's suddenly popped up, such as in **this.add(panel1)** in *Ex06/java*. The **this** part is not essential, but putting it in is a good habit to get into: remember that every method is a member of a class, so every method call is equivalent to the two-part **object.method()** where **object** is the instance of the class to which **method()** belongs. If the **object** part is missing the method is assumed to be a part of the class containing the current line, but it's a good habit to make every method you call have two parts, and you can refer to the current class using the **this** keyword. If you take a look on the disc, you'll see new versions of last months's examples to include the **this** keyword

You might think that because **this** is always assumed, a **this** keyword is never needed, but there are times when it is essential, such as when a method has a local variable with the same name as one of the class' fields. Whether you understand this or not – and all will become clear when we start to define other classes – it's a good habit to make sure all of your method calls consist of at least two parts by using **this** if needed.

There is one more interesting point about *Ex06/java*, and that is in the definitions of the check boxes. When a declared object is given a value using the = operator, that expression itself has the value of the left-hand side of the assignment. In other words, the expression:

```
feature1 = new Checkbox("Hot
weather");
```

has the value **feature1**, so we can replace the pair of lines:

```
feature1 = new Checkbox("Hot
weather");
panel1.add(feature1);
```

with the following, which is more concise and reduces the size of your source code:

```
panel1.add(feature1 = new
Checkbox("Hot weather"));
```

Panels

A panel is simply a construct that groups a bunch of other constructs







together under one name. That's all: the constructs, be they buttons, boxes or whatever, don't have to have any relationship to each other beyond the fact that they should all be displayed in the same area of the screen. Panels are for layout purposes only, but if you want to put solitary check boxes or radio buttons on your page, bear in mind that Acorn's Java refuses to display them unless they're in panels (this is a problem with Acorn's JVM which does't occur on other platforms), so it's not a bad idea to use them whenever you use check boxes or radio buttons.

Panels are just objects of the class **Panel**, so we can declare and define a panel as per usual, with the **Panel()** constructor. To add a component to a panel we use the standard **add()** method, but because we want to add to the panel and not to the applet's normal display we must ensure we put the panel's name before the **add()**, as in **panel1.add()** to add to **panel1**. When we've added everything we want to the panel we can then add the panel itself to the applet's display area by simply using **this.add(panel1)**.

Radio buttons

Radio buttons are very similar to check boxes, except only one button in a group can be ticked at any one time. Defining a set of radio buttons is easy in Java: you define them in exactly the same way as you do for check boxes – they are objects of the class **Checkbox** and can use the same constructors as outlined above – but you make them radio buttons by adding them to what is called a *check box group*. The JVM will take care of the rest, displaying the buttons as round LEDs rather than square ticks and dealing with the clicking correctly.

A check box group is just an object of the class **CheckboxGroup**, and is constructed using the **new CheckboxGroup()** command with no arguments. The *Ex07/java* program on the cover disc contains an example of a single check box group called **CGroup** which contains three radio buttons **country1**, **country2** and **country3**. These three buttons could be defined using the normal check box constructors and then added to the check box group, but there is an additional constructor that defines a check box and adds it to a check box group, which essentially means it defines a radio button. The constructor:

new Checkbox("Hello", cGroup, false)

defines an initially unticked check box in the check box group **cGroup** with the text Hello.

Clicks over radio buttons can be trapped in exactly the same way as for check boxes, using the **action()** method. The example program *Ex08/java* shows how to use panels to combine radio buttons and check boxes, and it also includes the first example of our own class definitions, **Countries** and **Features**. We'll cover class creation next month.

Scroll bars, choice lists and scrolling lists as shown by Fresco and Acorn's JVM

Check boxes, radio buttons and panels as shown by Fresco and Acorn's JVM

Scroll bars

Although a number of Java components implement scroll bars automatically – the text area we implemented last month is a good example – you can add your own scroll bars to your applet if you want. Take a look at *Ex09/java* for an example of adding a couple of scroll bars to your applet: they are objects of the class **Scrollbar** which can be defined with the constructor **new Scrollbar()**. The arguments to the constructor are the following five integers:

- **Orientation**: This can be **Scrollbar.HORIZONTAL** or **Scrollbar.VERTICAL**, with predictable results in either case;
- **Initial value**: Where the scroll bar is set to when initialised;
- **Thumb size**: The thumb size is how much the scroll bars should jump up or down to jump one 'page'; it's the value jump when you click in the blank area of the scroll bar;
- **Minimum value** and **Maximum value**.

Our scroll bar example, while not doing a whole lot – scroll bars are best attached to a scrollable area, something we'll look at later – demonstrates a different approach to event handling. We saw last month how we could use the **action()** method to trap button clicks, but this is only part of

the event handling story. Scroll bars need to take advantage of another more powerful event handling method, **handleEvent()**.

Advanced event handling

The method **handleEvent()** is the main method for trapping events: every single user event that can be trapped by a program can be trapped using **handleEvent()**, which is passed an object of the class **Event** as its argument. Event handling proceeds as follows: the default method **handleEvent()**, which will be used if you don't put your own definition of **handleEvent()** in your program, calls various simpler event handlers, like **mouseDrag()** for mouse drags, **keyDown()** for key presses, or the familiar **action()** for clicks on buttons, scrolling lists and so on. This is fine if the action you want to deal with has a simple event handler, but there are some events which do not have dedicated methods, and scrolling is one of them.

As a result we have to write our own **handleEvent()** method, as shown in example *Ex09/java*, to over-ride the default **handleEvent()**. This boolean method takes an event as argument, of which the **id** object can be interrogated to ascertain the event type. In the case of scroll bars the relevant events are shown in *Ex09/java*'s **switch** statement, which works much like the **CASE** statement in BASIC, executing code depending on the value of **e.id**: I'll explain **switch** in a minute.

If we deal with the event we should return a value of *true*, terminating our event handling. However, if we do not deal with the event, we reach the end of the method; if we just return *false* that will prevent the simple event handlers from being called, so it's a good idea to use the rather spooky-looking:

```
return super.handleEvent(e);
```

to ensure that any simple handlers like **action()** that we might have will still be called. Don't worry about how this works for the time being, just include it.

To round off our look at scroll bars, here's a quick explanation of the **switch** statement. It takes the form:

```
switch (exp) {
  case const1:
    <code>;
    break;
  case const2:
    <code>;
    break;
...
  default:
    <code>;
    break;
}
```

Java will go through the constant values **const1**, **const2** and so on until it finds a match; it will then execute the relevant code. The **break** command makes Java break out of the construct when the code has been executed (*Ex09/java* doesn't need **break** because the **return** commands will exit the method anyway); if **break** is not there, execution will 'fall through' and continue by executing the next match's code, which is something that we rely on in *Ex09/java* to catch all the scroll events and execute the same piece of code for each one. The optional **default** case at the end is executed if no match is found.

Choice lists

Onto our next constructs, choice lists and scrolling lists. A choice list is shown by Acorn's JVM as an uneditable text field and a pop-up menu icon: check out example *Ex10/java* for an example. Choice lists are simply objects of the class **Choice** which can be constructed with **new Choice()** and can have elements added to the choice list with the **addItem("Item")** method. The choice list can then simply be added to the applet's display with a normal **add()** call.

When a choice is made from a choice list the **action()** method is called, and **e.target** will point to the choice list object. You can find out which choice has been made by using the **Choice** class method **getSelectedIndex()** which returns an integer denoting the choice made, with 0 for the first item in the list, 1 for the second and so on.

```
import java.applet.Applet;
import java.awt.*;

public class Ex07 extends Applet {

  CheckboxGroup cGroup;
  Checkbox country1, country2, country3;
  TextField text1;
  Panel panel1;

  public void init() {
    panel1 = new Panel();
    cGroup = new CheckboxGroup();
    panel1.add(country1 = new Checkbox("Switzerland", cGroup, false));
    panel1.add(country2 = new Checkbox("Australia", cGroup, false));
    panel1.add(country3 = new Checkbox("India", cGroup, false));
    panel1.add(text1 = new TextField(20));
    this.add(panel1);
  }

  public boolean action(Event e, Object arg) {
    if (e.target == country1) {
      text1.setText("Ooo la la!");
      return true;
    }
    if (e.target == country2) {
      text1.setText("G'day mate!");
      return true;
    }
    if (e.target == country3) {
      text1.setText("Namaste!");
      return true;
    }
    return false;
  }

}
```

Code to do radio buttons

Scrolling lists

Scrolling lists are very similar to choice lists, except the choices aren't shown in a pop-up menu, they're shown in a list with a scroll bar to the right, so the user can scroll up and down and then double-click on a choice to make it. In Acorn's JVM (version 0.74) scrolling lists aren't shown correctly and the items are truncated to fit into the list, but otherwise they work fine: have a look at *Ex11/java* for an example.

The big difference between scrolling lists and choice lists is that in scrolling lists the user can make multiple choices, using the Adjust button. The flag passed to the constructor in the second argument should be true if multiple selections are allowed and false if otherwise; if you do pass this value you must include the first argument too, which is simply the number of items in the list. Otherwise everything is as for choice lists, with the **addItem()** method adding items to the list and the **action()** method catching user events.

```
import java.applet.Applet;
import java.awt.*;

public class Ex09 extends Applet {

  TextField textH, textV;
  Scrollbar scrollH, scrollV;

  public void init() {
    scrollH = new Scrollbar(Scrollbar.HORIZONTAL, 1, 10, 1, 100);
    this.add(scrollH);
    textH = new TextField("H: 1", 10);
    this.add(textH);
    textV = new TextField("V: 1", 10);
    this.add(textV);
    scrollV = new Scrollbar(Scrollbar.VERTICAL, 1, 5, 1, 50);
    this.add(scrollV);
  }

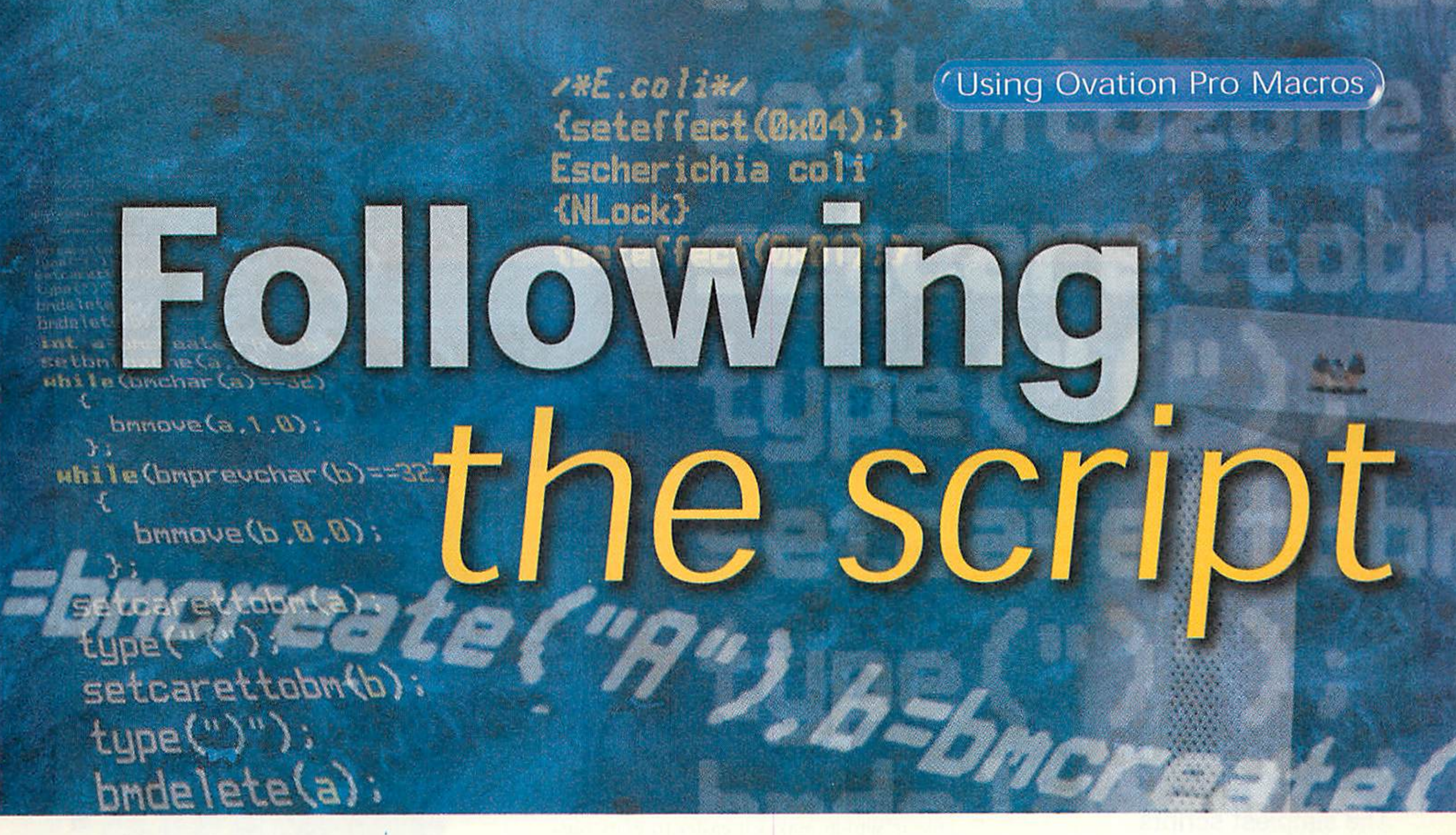
  public boolean handleEvent(Event e) {
    switch (e.id) {
      case Event.SCROLL_LINE_UP:
      case Event.SCROLL_LINE_DOWN:
      case Event.SCROLL_PAGE_UP:
      case Event.SCROLL_PAGE_DOWN:
      case Event.SCROLL_ABSOLUTE:
        if (e.target == scrollH) {
          textH.setText("H: "+scrollH.getValue());
          return true;
        }
        if (e.target == scrollV) {
          textV.setText("V: "+scrollV.getValue());
          return true;
        }
    }
    return super.handleEvent(e);
  }

}
```

Adding scrollbars to an applet

Next month

In this article we've covered a lot of ground, with plenty of new components and a further look at event handling. Next month we'll examine how we can control the layout of our applet's display, and how we can create our very own windows. AU



John Pettigrew begins a new series on the language of *Ovation Pro*

Word-processing programs have become more powerful over recent years, with many popular ones sporting snazzy new features. Some of these seem good at first but are actually little more than gimmicks. On the other hand, other features might seem boring or not very useful at first but, once you know what they let you do, suddenly become essential. This article introduces the scripting language of *Ovation Pro* (OvPro), showing how it works and the sort of things you can do with it.

What are scripts?

Scripts are a feature of many programs and are essentially just a series of instructions to the program. These instructions can be as simple as "Type this" or can be very complex, involving file handling, styles, effects and just about every aspect of the program – in *OvPro*, even the standard buttons and menus can actually be edited using macros or scripts. A macro is an example of a script that is attached to a button or key. Scripts can also be isolated files or built into extension applets that add completely new features.

Ovation Pro macros

OvPro's scripting language is based on C, which makes it slightly odd for those of us who grew up on BASIC, but it is very easy to get the hang of. However, there are a few important points that we need to be aware of.

- All instructions must end with a semi-colon (;). This is one of the commonest reasons for mistakes;
- Unlike BASIC, variables must be declared before they can be used. That is, you can't just write **a=32** without first defining what type of variable **a** is. *OvPro* supports integers, strings and voids.
- The mathematical operators are more varied than those in BASIC, which means that they are not always obvious. In particular, the equals sign is used to define variables **a=32** but to compare them you use **if(a==b)**. This is another of the commonest mistakes to make – in BASIC, you use a single equals sign for both, but you must use two for comparisons in C (and in *OvPro* scripts).
  Usefully, though, the language offers such shortcuts as !, which means **NOT**, and ++, which means increment, it will add one to an integer variable.
- Curly brackets {} are used to keep related instructions together, for example the whole macro is enclosed in curly brackets, as in Figure III.

Everyone works a different way, so you may find that my examples are not obviously useful themselves, but they should show you some of the things that are possible and the way the scripting language works. *OvPro* is undergoing continuous development, and some of these commands may not be documented (or, possibly, implemented) in your copy. However, upgrades are free and it is always best to have the latest version of software, so contact Beebug if you need to upgrade – the latest version of *OvPro* is 2.50.

Why bother?

It may seem a lot of bother to write a macro when you can do everything without them. In many cases, this may be true, but if there are operations that you do again and again, it may be worth writing a macro to do them for you. For example, if you write lots of letters to the same person, you might want to write a macro to insert their name at the click of a button, to save yourself typing it. Similarly, if you use special symbols such as © frequently, it saves calling up the characters window, selecting the one you want and then closing the window. The reason is always to save yourself trouble.

My own interest in macros arose because I edit lots of manuscripts from different authors. To correct their

```
/*E.coli*/
{seteffect(0x04);}
Escherichia coli
{NLock}
{seteffect(0x01);}
```

Figure I: A script to insert text at the caret in italic

Ovatio
mac

English or style, I need to do the same things over and over again (for example, removing double spaces, correct the spelling of commonly mis-spelled words and so on) and so I decided to write some scripts to make my life easier. Over the course of time, I have built up a number of scripts in several programs that I use and some of these are available on my web site (http://fly.to/silent.planet).

The simplest scripts

The simplest scripts possible in *OvPro* are those that simply insert text at the caret. However, they are still very useful. These macros can be recorded automatically, as described in the manual: create a new macro and click the Record icon. Any keys you press while the Macro window is open will be recorded in the macro. Alternatively, you can just enter the text into the definition icon. Either way, this allows you to enter text, including special characters such as Return or Tab, in a single action.

For example, "Boo!|M" will insert the text "Boo!" followed by a Return at the caret. The "|M" is an escape sequence, one of several available to insert characters that would otherwise be difficult to enter. Another possible use of these simple macros is to insert special characters, such as © or ÷, without having to call up the Characters window. Thus, creating a macro containing simply © as its definition would type this at the caret. The macro can, however, contain any amount of text, up to the limit imposed by the icon that contains the macro (255 characters).

```
/*Trinity*/
{
  string s;
  int i=0;
  while(getfontname(i++,s))
    {
      if(s=="Trinity")
        {
          setfont(i-1);
        };
    };
}
```

Figure II: A script to change the font to Trinity, laid out to make it easier to read

Effect changes

It is possible to change the effects applied to a section of text, bold or italic for example. A script that does this is shown in Figure I. This also shows why we mght want to do it – we can change the effect, insert text in that effect and then revert to normal.

Figure I shows this simple script with colour, which makes it easier to work out what is going on, but it doesn't look like this in the macro-editing window, unfortunately. The top line, in green, is a comment, which should be left out of the macro; the beginning of the comment is marked by /* and the end by */.

The **seteffect** command unsurprisingly sets the effects applied to the text at the caret, according to a table that is shown in the manual – the **0x** at the start of the number indicate that is a hexadecimal value; the **04** is the number itself. This value makes the text italic, which is correct for species name like *Escherichia coli*, but you can also apply bold, reverse, underlining and more. After the effect is set, we enter the text and then reset the text effect to normal (the number for this is **01**).

The **{NLock}** command before the second effect change is needed to flush the effects buffer. If this was not done, only the last **seteffect** command would have any effect (no pun intended), meaning that there could only be one change applied to the text in a script. What the **{NLock}** command actually does is simulate a press of the Num Lock key – if you use the keypad, you may need to press it again yourself after using it like this in a script.

You can see that this script is the same as the above examples but with two new commands added. This is the easiest way to learn to write scripts: break the problem down into smaller steps and learn to do each of those, then build the small steps up into something bigger.

Font changes

It is also possible to write a script to change the font, useful if you use certain fonts often. There is, in fact, an example of such a script built into *OvPro*, the button macro **Corpus**. This makes it easy to create your own font changes, because you can simply copy this macro and change the font name **Corpus** to **Trinity** or whatever you prefer (Figure II).

The top line, in green, is again a comment. The { by itself marks the start of the macro proper. The next two lines declare variables: the first, **s**, is a string variable but is not set to contain any particular value at this stage; the second, **i**, is an integer, which is set to zero.

The **while** statement is very similar to that in BASIC – while the expression in brackets is true (that is, non-zero) the rest of the statement enclosed by the curly brackets will be carried out repeatedly – the end of the statement is marked by the last semi-colon, which is easy to locate because of the use of curly brackets. **If** is also similar to BASIC – if the expression in brackets is true, then it will execute the following lines, (again, in curly brackets.

The details, however, might need some explanation. First, when the function **getfontname** is executed, it sets the string **s** to contain the name of the font whose number is **i**. Once all the font numbers have been scanned, it returns zero, terminating the **while** loop. The integer **i** is followed by two plus signs. These mean that one is added to the value of **i** each time the statement is executed, so there is no need to state this elsewhere.

Each time the font name is returned, the script checks whether it is **Corpus**. If it is, the command **setfont** is used to set



the font, using the number that returned this name. However, because the integer was incremented during the **while** statement, as mentioned above, its value is now one higher than it was. This means that the number passed to **setfont** must be **i–1**.

Thus, the first time this **while** statement is executed, the value of **i** is zero but is set to 1 immediately after the **while** statement is executed. This means that, if **Trinity** is font number zero, the **setfont** function will be called and we must subtract 1 from it in the **If** statement to get zero again.

```
/*Brackets*/
{
  int a=bmcreate("A"),b=bmcreate("B");
  setbmtozone(a,b);
  setcarettobm(a);
  type("(");
  setcarettobm(b);
  type(")");
  bmdelete(a);
  bmdelete(b);
}
```

Figure III: A script to insert brackets around the selected text

Moving around

What do we do if we need to insert text at more than one point in the document? *OvPro* provides a feature called bookmarks to allow this. These are markers that can be created and set to various locations throughout the document (they are even saved with it). The caret can be moved between these bookmarks, and selections can be set between any two of them.

There are two important things to remember about bookmarks: they must be defined before they can be used, and they should be deleted as soon as you are finished with them because they remain after the script is finished if you don't.

Figure III shows an example script that uses bookmarks to insert brackets around the selected text. First, two integer variables are declared and set to contain the handles of two bookmarks named A and B. The **setbmtozone** command sets the bookmarks held in **a** and **b** to the start and end of the currently selected text zone. Then, the caret is set to the start of the selected region (**setcarettobm** sets the caret to the specified bookmark) and an opening bracket is inserted, followed by the caret being set at the close of the selected region and a closing bracket inserted. Finally, the two bookmarks are deleted.

```
/*Brackets*/
{
  int a=bmcreate("A"),b=bmcreate("B");
  setbmtozone(a,b);
  while(bmchar(a)==32)
    {
      bmmove(a,1,0);
    };
  while(bmprevchar(b)==32)
    {
      bmmove(b,0,0);
    };
  setcarettobm(a);
  type("(");
  setcarettobm(b);
  type(")");
  bmdelete(a);
  bmdelete(b);
}
```

Figure IV: A more complete version of the script shown in Figure III

A small problem

This script does exactly what we asked of it, but it could be made cleverer. For example, if we have selected whole words which is likely, we will want the opening bracket to be after any spaces before the first word and the closing bracket to be before any spaces after the last word. Fortunately, it is easy to add a quick check step to the macro to make sure that the bookmarks are in the correct place before inserting the text. Figure IV shows the corrected Brackets macro.

The **bmchar** statement returns the ASCII value of the character after the specified bookmark and **bmprevchar** returns the value of the character before it. Remember that, in C and *OvPro* scripts, you need the double equals sign in this position.

After this check step, **bmmove** moves the bookmark according to the values passed to it. The first value is obviously the bookmark to be moved. The second specifies the direction to be moved (essentially, 0 means backwards and 1 means forwards). The third number specifies how far to move – in this case, 0 means one character, although you can also move by word, line and paragraph.

Thus, the first **while** statement checks whether the character after bookmark A is a space (ASCII value 32); if it is, the bookmark is moved forwards one character and the check redone. The second statement checks whether the character before bookmark **B** is a space and moves the bookmark back one space while it is. After that, the macro carries on as before. AU

This month, I've given a brief introduction to OvPro's scripting language and shown how some simple textual manipulations can be carried out. Next month, I will show you how to do more complex operations, including setting case, selecting and moving words, and more.



NEW WORLD COMPUTING Presents

HEROES of Might and Magic



Risc PC version £35.00 inc. VAT

DESCENT

Risc PC version

£30.00 inc. VAT



THE DEFINITIVE COLLECTION

AVAILABLE NOW



"HTMLEdit is the outright winner" — Acorn User

"The only HTML editor worth considering" — Acorn Publisher

"Using the program is simplicity itself" — Archimedes World

LockSmith £15
& PCSound Pro 2 now out too! £40

SiteSeer
Grab your favourite websites for offline viewing! £25

All-new Versions!

HTMLEdit



Next Generation WWW Authoring For RiscOS

All the tools you need for £105!

The press agree with us when we say that our RiscOS Web Authoring solutions set new standards in power and ease of use. Now, in our quest to produce an even more integrated and powerful solution, we've put together a single pack containing:

HTMLEdit 4+:	Java support, sound and music, link and image checking, syndax colouring and OLE....	£53
Enhanced Web Toolkit:	Visual frames, tables, animations, maps, palette control, drawfile conversion...	£30
WebSpell:	A complete HTML-aware spelling checker	£15
Webster XL:	The latest version of our hot new browser with frames, tables, forms, sound and JavaScript.	£25

Also, check out our new *SiteMaster* for absolute control over your whole site! £25

Check out http://www.rcomp.co.uk/

R-Comp, 22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS

Tel: 01925 755043 Fax: 01925 757377 Email: rcomp@rcomp.co.uk rci@rcomp.co.uk

New kid playing games

Alasdair Bailey begins his occupancy of the games chair

Welcome to another edition of Game Show. This is my first month here so I'll start by introducing myself: I'm Alasdair Bailey but many of you will already know me through my work at the Acorn Arcade website over the past year. Although I haven't written any games myself, I do like to think that I've struck up a good relationship with the various game companies out there so I'll be bringing you all the latest news regarding everything that goes on in the Acorn scene.

Artex

Artex, the producers of both *Exodus* and *Ankh*, are currently hard at work on three major projects. *TEK* (a shortened version of *technology*, I'm told) should be with us in the first quarter of 1999 and is a major home-grown war strategy game. The game features support for such things as Internet multi-play along with various levels of graphical pleasantness depending upon machine capability. Artex have promised that a demo of *TEK* will be on my desk sometime in the new year so watch this space for a full preview. For the time being though, a movie trailer for *TEK* was present on the 200th issue cover CD ROM.

Many of you will have seen the rolling demo of *Iron Dignity* which was also on the CD. Artex have assured me that they're still working on this very promising title but can't really give any firm release date yet.

Following the success of Jan Klose's freeware platformer, *BotKiller*, work is currently underway to produce a sequel which will be programmed by Richard Wilson and released at a budget price through Artex. I have an early preview of the game here and although the graphics are only very rough, it's looking like we're in for a rather nice all-round platformer with some nifty extra features namely multiple weapons, keycards and lifts along with excellent graphics. As you can imagine, Artex are rather busy at the moment so work on *BotKiller2* has been delayed but this promises to be another one to look out for in the early months of 1999.

R-Comp Interactive

As previously reported, both *Descent* and *Heroes of Might and Magic II* have now been successfully brought to the Acorn by conversion masters, R-Comp Interactive. R-Comp also sprung a surprise mini-release during November in the form of *Doom+* reviewed in this issue. *Heretic* and *Hexen* are also previewed following R-Comp's recent announcement of their imminent arrival.

R-Comp have also entered into negotiations with David Braben with regard to a possible conversion of his PC/PlayStation hit, *Virus2000*, to the Acorn. Those of you with long memories will recall that David co-authored Elite and then went on to produce a second hit, *Zarch*, for the Archimedes. In a recent post to the *comp.sys.acorn.games* newsgroup, he admitted; *"there are still a good few die-hard Archimedes supporters around to which I feel a certain loyalty"*. Zarch was later ported to other platforms under the alter-ego *Virus* and its sequel, *Virus2000*, was released not so long ago on the Sony PlayStation.

And the rest...

Kindred are currently working on a new home-grown Acorn title of the same genre as the PC hit *Worms*. *Skirmish* will take full

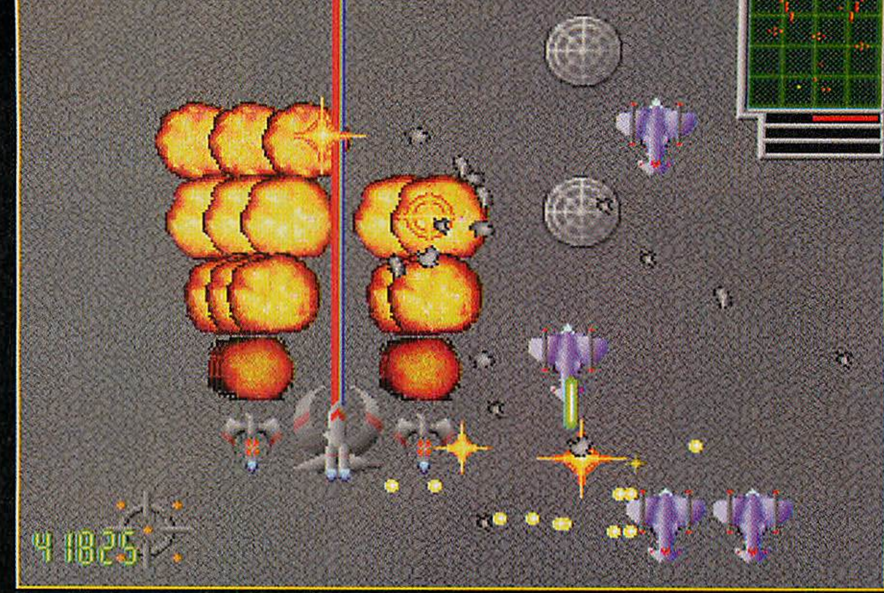


Kill those pesky worms in *Skirmish*

TEK: The Movie – a superb addition to the fold

advantage of the processing power of the higher end Acorn machines with weather effects, stunning weaponry and much more besides. Network play support is high on the agenda for the programmers which is a very good thing given the current lack of any reliable network playable games at the moment.

Skullsoft, the producers of the shareware text-adventure game *Arya*, are now working on a new upwards scrolling shoot 'em up. This latest production, formerly known as *Extreme Force*, has now been re-christened *Xenocide* and should be with us by the time this issue reaches the shops. Skullsoft's Chris Egan has worked closely with me on this project over the past couple of months and although the game isn't up to the graphical standards of current PlayStation games like *G-Darius*, it is very playable. Added features such as an upgrade shop and proximity scanner will make this shareware release a very worthwhile purchase. Expect a full review in the coming months.



Space blasting action from Xenocide

Well, it's looking as if 1999 will be just as good a year for Acorn gaming as 1998 was with no less than seven titles already on the cards and a few more which I can't talk about yet. R-Comp are also rumoured to be working on something big so if their previous run of conversions wasn't big, this new project must really be something!

If there's anything at all which you'd like me to cover on these pages or you're stuck on a particular game, e-mail me at *games@acornuser.com.*

Heretic and Hexen preview

R-Comp are currently working on yet another pair of conversions. This time they come in the form of *Hexen* and *Heretic*. Both titles were released in the time between id's two blockbusters, *Doom* and *Quake*. *Hexen* and *Heretic* are not your average 3D walk-about games though. Both have a magical twist in their storyline and although the levels feel decidedly *Doom*-like, the graphics are far more colourful and original.

Due to *Hexen's* magical theme, one has 'life' rather than health and mana is collected in place of ammunition. As you may have already guessed, *Hexen* and *Heretic* are both really just slightly modified versions of the *Doom* game engine. However, the feel of these two games is quite different to that of *Doom*. For example, *Hexen* supports jumping as well as look up and down keys as seen in *Quake* and other later releases of this genre.

At the time of writing, both *Hexen* and *Heretic* are in the very early stages of development. The *Hexen* engine from which these screenshots were taken is almost playable on a non-StrongARM machine so by release I should expect it will be perfectly usable on the lower end Risc PCs. Since there is a natural progression from the *Heretic* storyline into that of *Hexen*, R-Comp hope to be able to release both titles in the new year at a price within the £30 to £40 region.



Doom+

Return of the cacodemon

Early in 1998, R-Comp burst into the Acorn gaming market with their announcement that a conversion of the PC classic, *Doom*, was on the way. They haven't stopped converting since and now they've returned to *Doom* and given it a much-needed facelift. *Doom+* features many improvements over the original, many of which are behind the scenes which result in the game running approximately 20% faster overall.

A full review of *Doom* appeared in issue 194 so we'll just be looking at the improvements brought by the upgrade to *Doom+*. The front-end has been almost completely re-written and now offers far more flexibility along with being more user friendly than its predecessor. For example, there's now support for screen modes smaller than the default but why you'd need that is anyone's guess.

Add-on WAD files may now be selected and de-selected from the main window. The loading of *Doom* on any platform can be a rather laborious process at the best of times. *Doom+* has solved this problem by offering cached start-up which allows the game level data to be stored on disc once processed resulting in far shorter loading times.



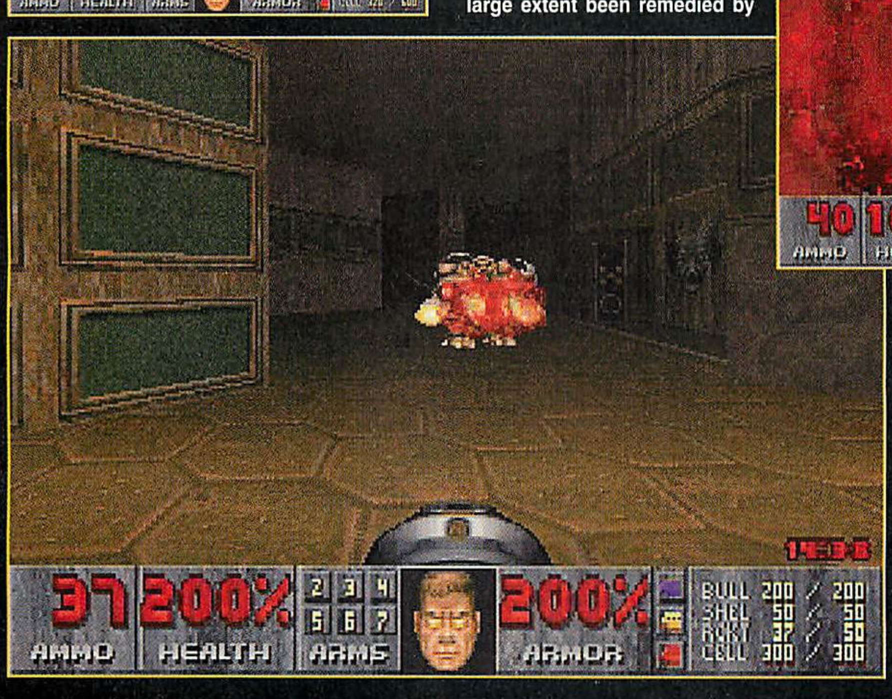
Many of the visible aspects of the game itself have also been tweaked. Transparency both in spectres and explosions is now supported, this adds to the feel of the game immensely but does slow things down a little on non-StrongARM equipped machines.

As requested by many on the gaming newsgroups, more of the selected weapon is now shown on screen. Another major in-game addition is the inclusion of a 'picture-in-picture' map which is constantly visible in the bottom corner of the screen. Many people like this addition because it provides a valuable navigational aid but others don't really see the point. The map is configurable anyhow so that's of no real consequence.

R-Comp have also included better network/Internet play support and although it has failed in all my tests both over a phone line and the Internet, they assure me that LAN and serial cable link play is trouble-free. The first version of *Doom* was criticised for its poor handling of extra levels downloaded from various internet sites. This has to a large extent been remedied by Justin Fletcher who carried out the improvements for R-Comp but there are still a handful of levels which make even the mighty *Doom+* fall over.

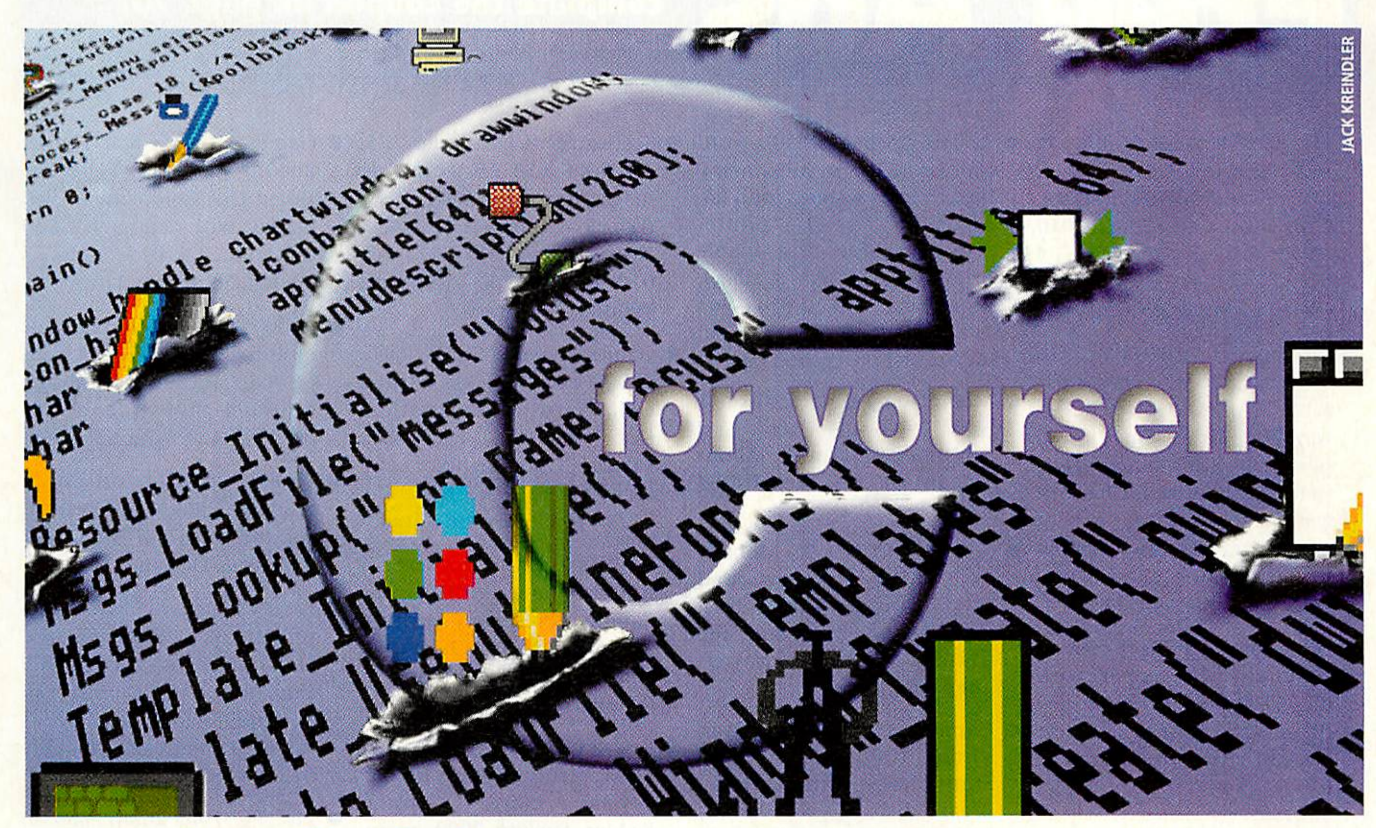
A number of other features which I would consider to be tertiary to the main game have also been added. Namely, there's now an optional small clock display and alarm facilities in the bottom corner of the screen along with support for CD audio play from your favourite music tracks. An 'atmospheric' option is available for use with both CD and MIDI music which alters the volume dependant upon the amount of on-screen action. This feature adds to the feel of the game rather nicely.

Overall, *Doom+* is well worth the £10 upgrade charge and adds value to new purchases of the full game which still retails at £32.50 inclusive of the upgrade. R-Comp are also promising yet another free upgrade to the game shortly which will include bi-linear filtering. Don't worry if you don't know what that is, without going into too much detail, it just makes the walls look nicer close up. *Doom+* will also run quite nicely on an A5000 if it boasts sufficient RAM. AU



Product details

Product:	Doom+ Upgrade
Price:	£10.00
Supplier:	R-Comp Interactive, 22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS
Tel:	01925 755043
Fax:	01925 757377
E-mail:	rci@rcomp.co.uk
WWW:	http://www.rcomp.co.uk/



JACK KREINDLER

Steve Mumford looks at validation strings in more detail

Having looked at the principles used when creating slider bars last time around, in this month's column I'll be explaining the properties an icon may have in more detail – including the use of icon validation strings, which can come in handy for improving the appearance of your application or using features that the WIMP implements automatically, such as password concealment.

Icon validation strings are arrangements of characters that are passed, almost as an extra parameter, to the icon generation function. These strings of characters can encode a variety of different commands which range in function from changing the appearance of the icon to altering the way it behaves. The beauty is that some of these features can be used to increase the functionality of an application without having to write pages of extra code; they also help standardise the interface presented to the user between different applications, something conspicuously lacking in certain other operating systems.

Validation strings aren't automatically used, and won't even be considered if the icon's properties don't indicate that one is required. One word of memory is used to store the flags that govern the properties of an icon, and when set, bits 0, 1 and 8 indicate to the WIMP that the icon contains text, a sprite, or has indirected data. Indirected icons store extra pointers in their three-word data block so that the space restrictions of the usual icon definition can be worked around.

Depending on the combination of the **Text**, **Sprite** and **Indirected** flags, the three icon data words change their meaning, and validation strings are only appropriate for indirected text-only or indirected text-and-sprite icons. In these cases, the first word of the data block holds a pointer to a suitable text buffer, the second word points to a validation string and the third gives the length of the text buffer provided.

The most common use of a validation string is probably in the construction of a combination text/sprite icon – placed on the iconbar, for instance. In this case, the validation string is used to contain the name of the desired sprite, and is given in the form **'Smysprite'**, where the first letter **S** indicates to the WIMP that the following characters form an appropriate sprite name. It's also possible to supply a second sprite name to be used when the icon is highlighted – this is done by including the second name after the first, with a comma between them. This is an example of a validation string command, and several of these can be included in one string by separating them with a semicolon.

When requesting input from the user via a writable icon, it's particularly useful to be able to limit the range of characters that the icon will accept, so that the programmer doesn't have to write checking routines to analyse the string and filter out any unsuitable input. This might be used to make sure the user enters a valid number or filename, for instance. The **Allow** command lets the WIMP automate this task; all the programmer has to do is decide which characters are to be inserted into the writable icon – the rest are sent to the task via a **Key_Pressed** event, so that they can still be dealt with.

To specify a set of characters to allow, you can either include them individually, or as a group. For instance, **Aaeiou** would produce an icon that would only accept the five vowels as input, whereas **Aa-zA-Z** would accept lower or upper case alphabetic characters. When it's not convenient to explicitly include every character you want to accept, it's possible to exclude individual characters and groups, too – this is done by preceding the group or character with the tilde character ~. **Aa-z~aeiou** would include all lower case letters except the five vowels, and **A~0-9** would allow anything to be typed as long as it wasn't a digit. Four special characters are used in validation strings – these are ~ - ; and \. We've just met the first two; the semicolon is used to separate validation commands and the backslash allows you to refer to the special characters within the allow command – **Aa-z\;\-** would include all lower case letters as well as the semicolon and hyphen.

There are several other useful validation commands; **Display** masks the contents of a text icon with an appropriate number of symbols, so the command **D*** would display a text icon containing the word **'hidden'** with **'******'**. The **Keys** command is also rather handy as it can be used to add extra editing functionality to an icon set free-of-charge – if you want the user to be able to navigate between several writable text icons using the arrow or tab keys, you can use the validation commands **KA** or **KT**.

That's all we have time for this month – I'll see you soon. AU

Free Ads

To submit a free ad to Acorn User, complete the coupon on page 70. 25 words maximum per ad.

- Risc PC 700, 26Mb, 850Mb HD, PC Card CJE 586-133, RISC OS 3.6, AKF60 monitor, CD-ROM, Cannon BJC610 colour printer. £950 ono. Tel 01782 245204 or e-mail Andy on u6f44@ugf.keele.ac.uk

- Archimedes A310M, RGB Monitor, RISC OS 3.01, MEMC1A, 2MB RAM, Ifel 4-way backplane, Dual Serial port, Joystick Armadeus (sampling) software, Various games incl. Elite, 3 years of Acorn User and Risc User. All in full working order. £100. Tel Jeremy 0961 403741

- Panasonic KXP-1180 printer, comprehensive paper handling, several fonts, four new ribbons and perspex stand. In original box with handbook, UKP60 ono. Tel Nick 01252 409138

- Risc PC 700, Twin Slice, 24+1 Mb, CD-Rom Drive, RapIde Card, Audio Dynamics DMI 50S Card, DX4-100 PC Card, 3.8 Gb and 420 Mb Hard Drives, 28.8 Kbps Modem, Midiworks, Prosound and Studiosound plus lots more software, All Boxed, As New, £1000 ono Tel. 01642 711866 (Cleveland / N.Yorks)

- Risc PC 700. As new lots of software 486 PC card with Win 95 Office etc. £400 ono. Tel 01773 824993 (Derbys)

- A3010, monitor and software. Hard disc. As new £110. Tel: 01428 722788 (Hants)

- A3010 Learning Curve. All manuals, full software with Swift 2000 printer. Hardly used. £250 ono. Tel: 01407 831725 (Anglesey)

- SWAP Minitower P233MMX 32Mb/1.1Gb, 14in SVGA, graphics & sound card, 24X CD, Win95 Internet-ready FOR RiscPC minimum 10Mb/850Mb, CD drive & software; Or sell for £400 ovno. Tel: 01204 571836 (Bolton, Lancs) John.

- A3010 2Mb, HD. No monitor (uses TV), plenty of software, (games & utilities). Tel/Fax: 01732 810884. E-mail: gill@levity.demon.co.uk

- A3010 2Mb, AKF30, word processor, m, joystick, many boxed games (Birds of War, Lotus 2 etc) printer also available; reasonable offers considered. Call G. Morrison on 0141-943 1983 (Glasgow); E-mail: gregimorrison@yahoo.com

- Micro User mags from issue 1 plus Acorn User and Archimedes World. About 100 in all. £10. Tel: 01484 326697

- A3010 4Mb/340Mb. Monitor with filter, speakers and joystick. Software incl. Ovation Pro. £175 ono. Tel: 01302 726869 (Doncaster) after 6pm

- Games for sale: Birds of War; Virtual Golf (and courses); Stunt Racer (and tracks); Break 147; Cyber Chess; Chequered Flag. £10 each. Tel: 0958 746440. E-mail: sspooner@yahoo.com

- Reconditioned A3000, 1Mb, ROS2, network i/f, econet, serial upgrade, DS/DD floppy drive, monitor, 200 software titles of buyers choice, £89.99. Tel: 0151 637 0993 (Wirral)

- Risc PC 700, 200MHz StrongARM, twin slice, 34Mb/1.2Gb, Cumana SCSI 2, 2X CD drive and 8X CD-drive: £695. Also Acorn C/C++ v5: any offers. Tel: 01524 848373 (Lancs)

- WANTED! A4 portable with 4Mb RAM & HD of any capacity, for work & presentations at college. Will swap for couple of A3020s or A3000s with ROS3, 4Mb, monitors and SCSI cards. Tel: 01953 681684 (Suffolk) after 6pm. Mike.

- FOR SALE: Funky A3020s & A3000s with ROS3, 4Mb, monitors and SCSI cards, vgc. £200 ono for A3020, £120 for A3000. Also available: A3020 parts eg keyboard, innards etc call for details. Tel: 01953 681684 (Suffolk) after 6pm. Mike.

- WANTED! 4 to 8Mb RAM upgrade for A5000. Tel: 01953 681684 (Suffolk) after 6pm. Mike.

- Software: !CDSampler £5; T.A.N.K.S. £12; 25 Acorn User magazines, 40 cover discs (Feb '97-Christmas '98) £20; Stunt Racer 2000 £12. Tel: 01297 20326 (Devon). Yvonne.

- Games, boxed: Stunt Racer 2000, extra tracks; Virtual Golf, Augusta Course; High Risc Racing; T.A.N.K.S.; Saloon Cars Deluxe: £12 each. Or £55 the lot. Tel: 01297 20326 (Devon). Tom.

- WANTED: I need a cheat for Infinite money on the game Exodus. Preferably written using Doggysoft's CheatMod. Offer £5. Tel: 01246 558130 (Chesterfield). Jamie.

- Risc PC 700, AKF60, CD-ROM, plenty of software inc. Crystal maze, Cannon Fodder, Simcity 2000; many 10/10 titles etc. Tel: 01795 874547 (Sheppey, Kent)

- Risc PC 600, 22Mb/1.7Gb, Aries Monitor, DX4-100 PC card, lots of software & games. £650 ono. Tel: 01222 621149 (Cardiff). E-mail: iandarney@aol.com

- MelIDI MIDI sequencer, £90; Roland PMA-S General MIDI, GS sequencer, drums with Acorn lead and software (was £200+£38) now £250. Tel: 01709 816268. James.

- StrongARM Risc PC, 4Mb/540Mb, 32X CD-ROM, AKF60, Style, Eureka, RISC OS 2 PRMs, other programming manuals: £700. Tel: 01932 571216 (Chertsey, Surrey). John.

- For sale: Disc Doctor, £6; Hard Disc Companion, £7.50; PC Survival Guide, £5; Impression Style (dongleless) 4.09, £20; Desktop Database, £6; Almanac, £7.50; Micro Maths, £6; Linkword Spanish, £10; all boxed with manuals & post. Tel: 01268 734215. Max.

- StrongARM Risc PC 20Mb/1.2Gb 12X CD drive, AKF60 monitor software inc TextEase: £800 ono. Tel: 01267 232257 (West Wales). Patrick.

- Games for sale: Star Fighter 3000; Heimdall; Diggers; Holed Out Compendium; all boxed with manuals: £20 each ono. Tel: 01935 424778 (Yeovil, Somerset). Ian.

- A5000 4Mb/120Mb multisync monitor, RISC OS 3.1; loads of educational & leisure software: £195 & post. Tel: 01268 734215. Max.

- A5000 8Mb, Mitsubishi ScanLight Plus 2. Excellent condition: £275. Tel: 0171 722 0602. Dr Kane.

- Laser Direct card, drives LBP4 printer, £25; Cumana SCSI SLCD card with CDFS, £40; Cumana SCSI CD drive in external Cumana case + cables + manual, £45. Tel: 01268 478347.

- Risc PC 700, 26Mb, 850Mb HD, PC Card CJE 586-133, RISC OS 3.6, AKF60 monitor, CD-ROM, Cannon BJC610 colour printer. £950 ono. Tel 01782 245204 or e-mail Andy on u6f44@ugf.keele.ac.uk

- Archimedes A310M, RGB Monitor, RISC OS 3.01, MEMC1A, 2MB RAM, Ifel 4-way backplane, Dual Serial port, Joystick Armadeus (sampling) software, Various games incl. Elite, 3 years of Acorn User and Risc User. All in full working order. £100. Tel Jeremy 0961 403741

- WANTED! 4 to 8Mb RAM upgrade for A5000. Tel: 01953 681684 (Suffolk) after 6pm. Mike.

- Panasonic KXP-1180 printer, comprehensive paper handling, several fonts, four new ribbons and perspex stand. In original box with handbook, UKP60 ono. Tel Nick 01252 409138

- Risc PC 700, Twin Slice, 24+1 Mb, CD-Rom Drive, RapIde Card, Audio Dynamics DMI 50S Card, DX4-100 PC Card, 3.8 Gb and 420 Mb Hard Drives, 28.8 Kbps Modem, Midiworks, Prosound and Studiosound plus lots more software, All Boxed, As New, £1000 ono Tel. 01642 711866 (Cleveland / N.Yorks)



Dave Acton and Dave Lawrence reach the final chapter of the logo story

st★r info

Let's twist again

Author: Philip Mellor

1974. That's 25 years ago! Crikey. I've just tried to ask AltaVista what else happened in 1974, but it came back with 1,709,347 matches of which the first was about Van Halen (which, by a strange coincidence is an anagram of AltaVista) [*eh? Ed*], so no luck there. All I can tell you is that 1974 is the year that Mr. Erno Rubik made and solved his first cube. He didn't patent the idea till the year after and production waited a while longer after that. Needless to say the late 70's were awash with that wonderful creaky plastic sound and gloating smugness of your mates who could solve the darned thing.

A quarter of a century later and **Philip Mellor** presents us with a virtual desktop cube. Call me old fashioned if you want, but I always thought that one of the main attractions of the cube *was* that creaky plastic and gloating smugness, but then again 25 years does almost qualify Erno's finest for the scrutiny of Hugh Scully.

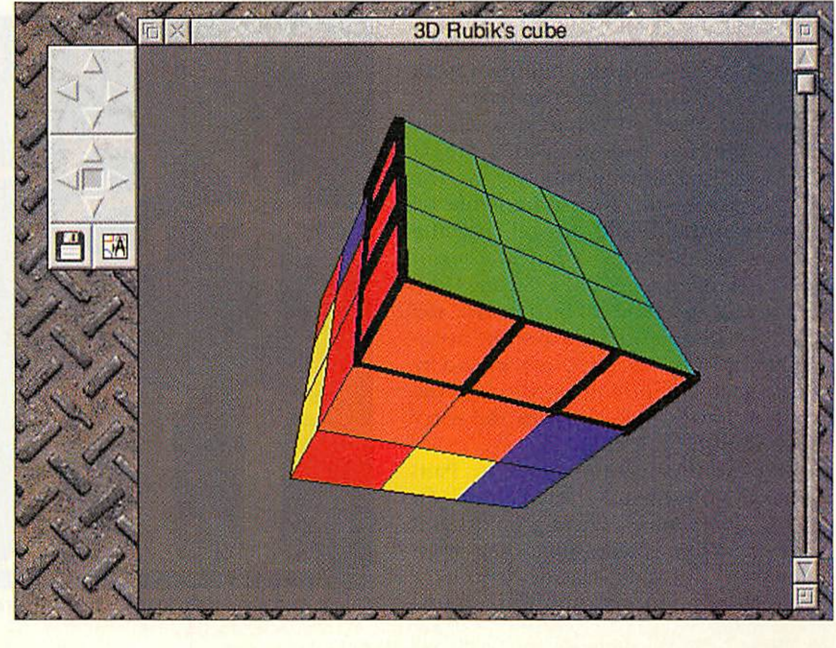
Philip's program does not solve the puzzle for you, (what would be the point of that), but does carefully scramble it. You are then presented with a 3D view which you can rotate with a selection of arrows or by dragging with the mouse. I believe you have to use the right mouse button. The 3D view can be customized in a couple of ways, you can change the colours of the sides and, as the image is actually a drawfile, increase the thinkness of the lines making up the cubes. Both these options are available from the Choices window on the iconbar icon.

The exaggerated perspective adds a remarkable degree of depth to the proceedings. As the cube is a drawfile, it is incredibly easy to render the image at any size. The window resize icon can be used to drag the window to any size you like.

To twist the puzzle, double-click on one of the cube's faces, this will highlight one slice (one layer of cubes). Double-clicking again will select the layer in the other direction – try it to see. To move the layer, drag SELECT over the highlighted area, think of it as picking up the layer and moving it. Despite the inherent problems of manipulating a 3D object in 2D space with a 2D tool, these controls are quite straightforward to use.

Two extra gadgets are provided on the tool bar: The disc icon lets you save your position (what do you mean you can't do it in 17 seconds?) and the other saves the contents of the window as a drawfile.

The program does not detect when you have solved the puzzle, so you will have to generate your own gloating smugness.







How lo can you go?

Author: Richard Possnett, Paul Raine, Graham Stratton and Mark Final

Yes, it's the moment you've all been waiting for. Well, the two moments that is. Our latest challenge put your programming talents to the greatest limit yet. But, as always, you rose to the challenge and showered us with two-second masterpieces. Thank you to all who entered – it is always a pleasure to see how contributors old and new can tackle the same challenge in such a variety of ways.

To recap, we challenged you to design a logo for *INFO – an animation that would last no more than 2 seconds (well, we gave you the benefit of the doubt and ran entries on a StrongARM). And if that wasn't hard enough, we said you couldn't use more than 32K. These challenges are obviously too easy so we'll have to make that 1 second and 4K next time...



Wibbly *info logo by Richard Possnett

Mini-morphing *info logo by Paul Raine

Unlike previous challenges, there was one pretty clear-cut winner this time. But we had a nice range of entries and there are several who deserve an honourable mention, a few square millimetres of coverdisc and a couple of crisp fivers.

Richard Possnett adopted a classic *INFO approach and wibbled a *INFO motif in a traditionally wibbly way. The program breaks the two second rule by taking a little while to set up the necessary wibble tables, but the main effect is fast enough on a StrongARM. Having well and truly wibbled its last, the logo then disappears in a broken-neon-sign kind of way. The effect is achieved by a little piece of machine-code and the logo is a drawfile, which keeps the entry well within the 32K limit.

Next worthy mention goes to **Paul Raine** of, York who started from an entirely different, er, starting point, and consequently ended up somewhere even differenter. His multi-tasking logo is a triumph of mini-morphing – transforming RISC OS into Start Info in under two seconds. Drag with Select, or click with Adjust to unmorph. Of course, strictly speaking the process never really finishes, so might break the smallprint of the time-limit rule, but since it's his first offence, we'll be lenient.

A final mention before the grand winner goes to **Graham Stratton**. His entry is in many ways the most appropriate to *INFO since a listing of his code actually forms part of the design. We think this was probably deliberate, although it would be nice to think that he just used the wrong OPT parameter and then liked the result – so many *INFO masterpieces have resulted from such serendipity.

There are three version of Graham's logo – Mode 15 and Mode 28 logos for pretty much all machines, and a Risc PC version with more frames. You can run *RP* on any machine that supports Mode 28 but it needs a Risc PC to abide by the rules.

And so to our final winner, who as it happens is none other than **Mark Final**. Mark is a PhD student and lecturer in the Numerical Optimisation Department of the University of Hertfordshire, which probably comes in very handy when trying to write an optimal entry to one of our challenges.

Although Mark's entry requires a StrongARM to run in under two seconds, it's still a pleasure to watch on slower machines and was pretty much exactly what we had in mind when we set the challenge way back last October. It's simple yet striking, and best of all is written in C++. The source is included on the disc for you to peruse at your leisure.

Apparently, the inspiration for the design was Frank Föhl's original demo *Iron Dignity*. Mark knew from the outset that he wanted to use vector graphics and settled on a two-dimensional scheme, which simplified some of the calculations but made the lighting effects trickier.

The letters were built up from triangles using *ArtWorks*. Our five-point star proved a little awkward so Mark eventually settled for an 8-point version. And the original plan of a final light explosion filling the screen would have taken the program over the time limit, so Mark went with the "glowing" star suggested by his Dad.

An object-oriented approach (appropriate to the C++ environment) was adopted, with each vertex defined only once, and triangles defined in terms of vertices and letters in terms of triangles and so on.

The moving light is modelled in a different way, the blurred effect being achieved by simply plotting concentric circles of different whitenesses. The lighting model used to highlight the tops of the letters is based ("very roughly" on an inverse square model: C / r^2

"If I remember my A-level physics correctly this is used to determine



Colour matching *info logo by Graham Stratton





luminosity from a point source where r is the distance from that source. However, I think this model only applies in three-dimensions, so it probably doesn't produce quite the right effect in my two-dimensional model. Anyway, the basic idea is, the further you are away from the light, the less illuminated you will be."

Mark estimates the centre of each triangle using a simple formula, and then calculates the distance from the light source.

"Another class that I have defined is the Mode class, which encapsulates the data that I need to plot objects to the screen. This uses the RISC OS 3.5+ notion of a mode specifier block. Functions that are available through this class are to swap screen banks (2 are used), to synchronising screen banks (for a smooth start and end), waiting for a vertical sync, and clearing the screen. The last two are actually independent of the screen mode used so are implemented as static functions. This indicates to the outside world that although they are related to screen modes, they have no need for specific data.

"The actual plotting of triangles and circles uses the SWI OS_Plot. The ColourTrans module was used to obtain the nearest colours to what I wanted in the current screen mode. I also told it to use ECFs whenever appropriate so that dithered colours could be used in modes of a lesser colour depth. I wouldn't suggest dropping to a colour depth of less than 2bpp – this is about the minimum that the animation looks any good."



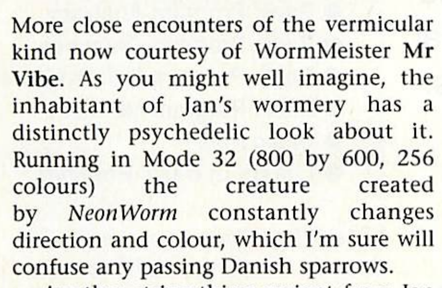
The winning *info logo by Mark Final

If you have a copy of the C++ compiler, you might like to try using a mode with more colours. Increase the last parameter in the **Mode screenmode** command in *Logo* from 3 to 4 or 5 and then recompile.

The finishing touches are being applied to our next challenge, full details next month.

A worm welcome

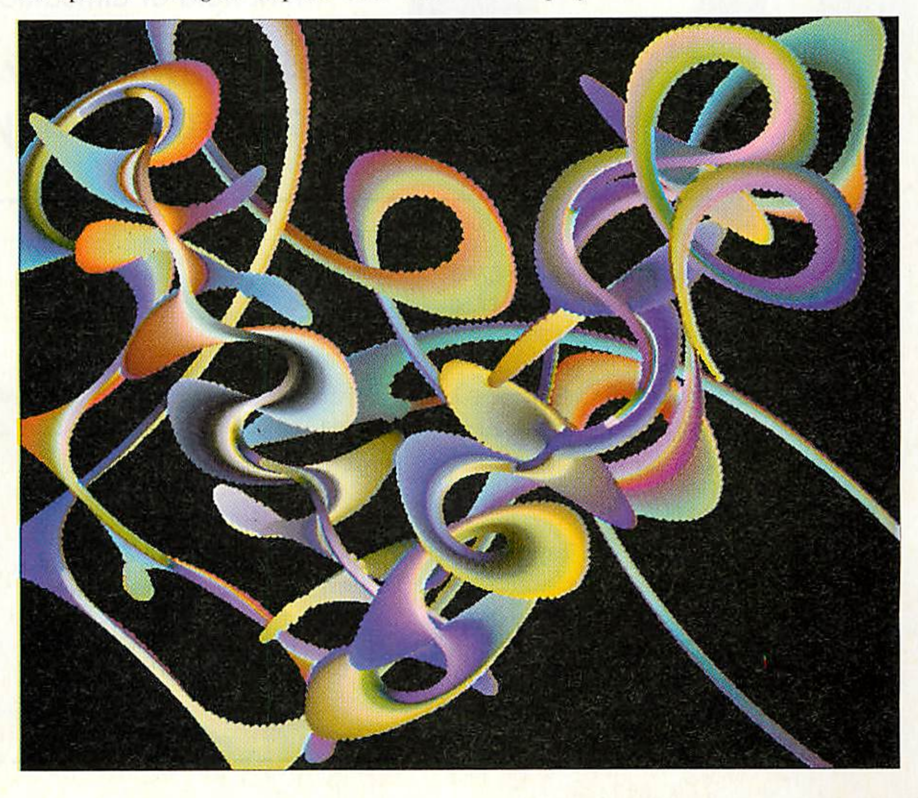
Author: Jan Vibe



More close encounters of the vermicular kind now courtesy of WormMeister **Mr Vibe**. As you might well imagine, the inhabitant of Jan's wormery has a distinctly psychedelic look about it. Running in Mode 32 (800 by 600, 256 colours) the creature created by *NeonWorm* constantly changes direction and colour, which I'm sure will confuse any passing Danish sparrows.

Another string-thing variant from Jan next, in the shape of *Painter*. There are actually three flavours – *Painter* is the original Risc PC version, with *Painter2* for non-Risc PCs. *Painter3* gradually reduces the already painted area, snipping out the odd pixel row or column here and there. This gives the impression of "painting in 3D space". I imagine Captain Kirk was pursued through 3D space by many such vast ribbonlike entities in the course of his employment.

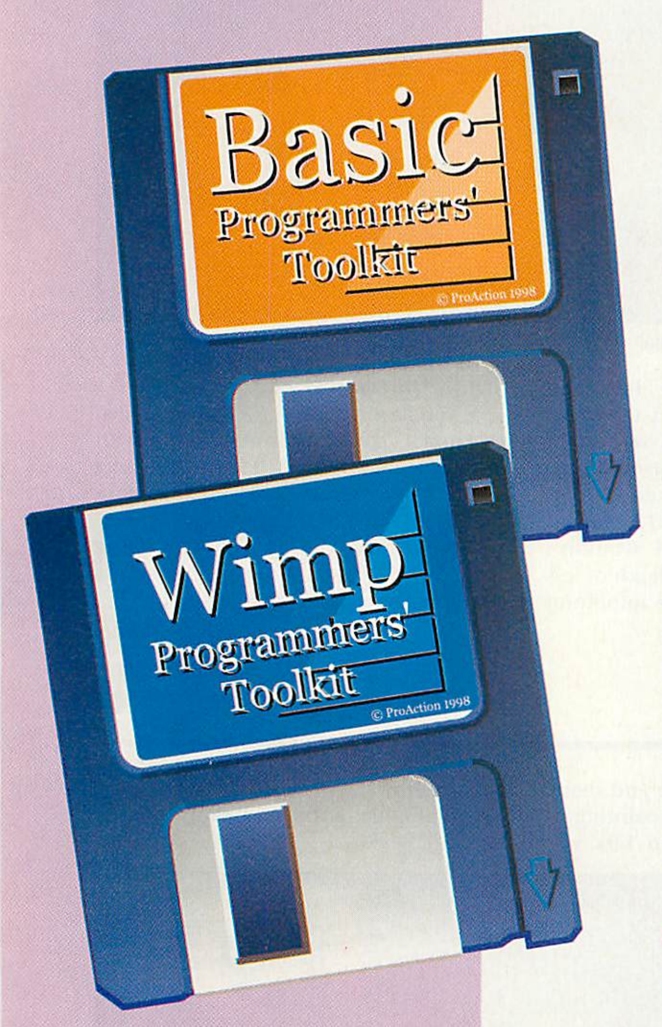






Special Offer

All the programming help you could need



Basic Programmer's Toolkit and Wimp Programmer's Toolkit just £7.50 each or £13.50 for both

These complementary discs provide programs and utilities to make the task of creating Basic programs and multitasking Wimp programs that much easier allowing you to concentrate on the important parts of your work.

Written by programmers who know the pitfalls, these two disks provide genuine help for you to build up your skills and abilities in this potential minefield of difficulties.

Available now so order today

The *Basic Programmers's Toolkit* contains the following applications with explanatory handbook:

- Basic Program Printer
- Basic Program Formatter
- SWI Manager
- Basic Program Analyser
- Basic Program Cruncher
- Basic Program Differentiator
- Basic Program Monitor
- Basic Help
- Library of Basic Routines

The *Wimp Programmer's Toolkit* contains a complete handbook and these applications:

- Window Template Editor
- Menu Template Editor
- Wimp Monitor Utility
- Template Information Utility
- Icon Locator
- Shell Wimp Program
- Single Window Shell
- Wimp Flags Generator
- Poll Mask Generator
- Basic Procedure and Function Analyser
- Basic Variable Lister
- Wimp Debugging Utility
- Multitasking Memory Viewer
- Wimp Message Monitor
- Wimp Library

ORDER FORM

YES! Please send me:

- ☐ Basic Programmers Toolkit for £7.50
- ☐ Wimp Programmers Toolkit for £7.50
- ☐ Both Toolkits for just £13.50

Free P&P in the UK only

- ☐ Add £1 P&P per item if ordering from Europe
- ☐ Add £2 P&P per item from outside Europe

Value of order £__________

Name ....

Address ....

....

....

....

Postcode ....

E-mail ....

I wish to pay by:

- ☐ Cheque/postal order (payable to Tau Press Ltd)
- ☐ Credit Card (Visa/Barclaycard/Mastercard/Access)

Send your order to:
Toolkit Offer, Tau Press,
Media House, Adlington Park,
Macclesfield SK10 4NP.

Credit Card No: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry Date: __ / __

AU9902

☐ Please tick here if you do not wish to receive promotional information from other companies





Lost in a maze of windy passages

Author: James Andrew

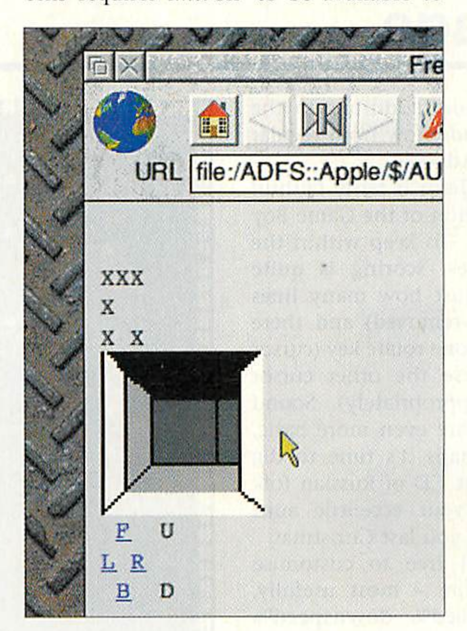
It was never made clear whether those passages were windy enough to fly a kite or windy enough to make you dizzy. Either way, they were certainly windy enough to have to wander around N, E, S and W-ing for ages until you stumbled on the exit or, more often than not, back out the way you came in and into the hands of that troll with the attitude problem.

James Andrew's *HTMLmaze* recreates the latter sort of windy maze. The cunning bit is that you explorations are carried out using a web browser, but there is no java, javascript or CGI anywhere to be seen. The maze is crammed into a single HTML page with '#' links taking you around its twisty path.

Double-click *HTMLMaze1* to generate the maze. This will save a file called *maze/htm* in the same directory. Assuming you have a browser available, double-click this file to start you quest. You will be shown an overhead view of your surroundings – you are the 'o' and the walls are X's. Your quest is to find the magical '*' which enables you to escape from the cursed labyrinth. Below the map display is a set of compass points, to move simply click on the appropriate directition link. The maze is set on multiple levels and you will find stairs going up '/' and stairs going down '\'. The U and D links should now be self-explanatory.

To add a little unfairness to the game, there are also invisible walls which you cannot pass through and fake walls which you can! The latter are a little like the secret areas in Doom, except you cannot even spot them by different wall textures – an X is an X in this game.

HTMLMaze2 also generates a maze, but by clever use of a large selection of GIFs, renders your view of the maze in 3D! (Ahhh. this takes me back a while to my first article in *Acorn User*, back in issue 49 I think, my 3D maze ran in Mode 1 on a BBC B...) You'll need to run the small app *MakeWalls* first to create the GIFs, these will be placed in a directory called *images*. This requires *InterGIF* to be available to perform the clever GIFiness.



Both versions of the maze are generated from sprite files. If you open either directory, you'll find a file called *map*. Load this into *Paint* to edit the levels. The *exact* colour of each pixel is not important, as only the colour is read – the tint is ignored.

Black/Dark Grey (colours 0-3) – walls

White/Light Grey (252-255) – corridors

Brown (4-7) – end point. You can have as many of these as you like; the game will end as soon as you touch one.

Dark Red (16-19) – 'Up' stairs, have as many as you like.

Bright red (20-23) – 'Down' stairs, as many as you like

Green (32-35) – Fake wall

Khaki green (36-39) – Invisible wall

You can add as many levels as you like, although each must be the same size and named consecutively. You can only ascend or descend a flight of stairs if there is actually a floor above/below to go to, and if there is a staircase in the next floor which would allow you to return to the current level. The starting position for each game is Level 1, coordinates (1,1) from the bottom left corner, and in the case of HTMLMaze2, facing north.

Anyone up for a random maze generator? *[oh no, Ed]*

Rug addict

Author: David Blake

Our long running small theme seems to be as popular as ever – this latest addition to the Gallery of Minutiae is from **David Blake**. Tipping the scales at 1022 bytes, *MadRug1k* is a fine example of *INFO coloured insanity.

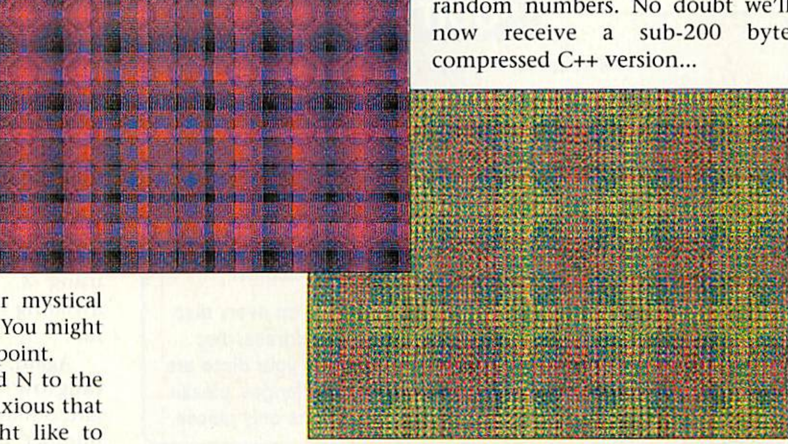
Run the program and answer 'No' to both questions this will get you started quickly and present you with the first of an infinite stream of mad rugs. Infinite that this unless you press Escape. Or Break. Or reset. Or switch the machine off. Or you forget to pay your leccy bill.

Once you have studied every intricacy of this first mad rug press Space to view the second, and so on. I'm sure you get the idea. Many of the rugs are quite 'samey', but maybe one in twenty exhibits a particularly fine quality, some are shockingly blocky; some are subtly graded.

But how do you recreate a particularly fine weave? I hear you ask. Well, you need to vary your responses to those first couple of taxing questions. To start with you might like to answer N to the first and Y to the second. After each rug, this will show you the four mystical numbers required to regenerate the warp and the weft. You might find an old fashioned 'pen' a handy implement at this point.

To astound your friend at a later date, enter Y and N to the questions and type in the four numbers. If you are anxious that your friend might steal your rug design, you might like to position your keyboard away from them so they cannot see what you are typing. You will also need to cover the top left hand corner of the screen with an opaque cloth or book.

The figure 1022 is actually somewhat misleading, as that includes the source code for the measly 160 bytes of ARM code. The rest of the program does things that are harder to do in machine code, namely COSINEs and, to a lesser extent, generating random numbers. No doubt we'll now receive a sub-200 byte compressed C++ version...











Welcome to the machine (again)

Author: John Williams

A Basic version of a classic utility now from **John Williams** of Birkenhead. His short Basic program reads your machine's unique ID number and puts it in a couple of system variables – *Machine$ID_A* and *Machine$ID_B*.

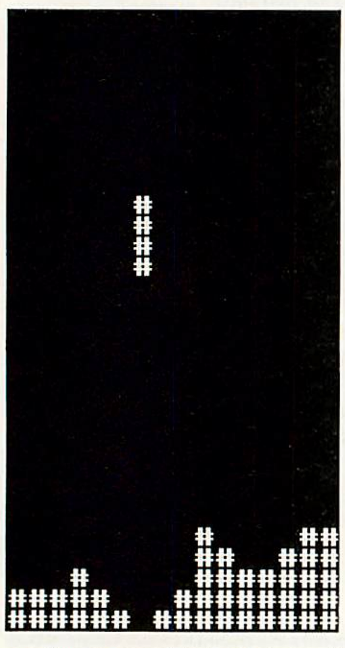
It can be useful to read the machine ID – as a means of software protection perhaps, or, where there are many machines in use, as a sure-fire way of distinguishing between them. The ID is read using the system call OS_ReadSysInfo with r0 = 2 and comes back in r3 and r4.

The inspiration for this little Basic program came from one of dL's utilities – way back in 1995. To further aid machine identification, dL's prog also set up a code variable called *Machine$Name* which allowed you to give your machine a textual name, stored in user non-volatile memory. We still use this facility to this day, although you should always be aware of the perils of using the user battery-backed RAM.

My own machine was, for reasons long forgotten, called *Nuthatch*, but somewhere along the line some *INFO utilitette nobbled the final *h*, and until this day it has gone under the name *Nuthatc*. Until that is another *INFO ditty turned it into *Outhatc*. But, as always, I digress. For historical, and possibly sentimental reasons, dL's original code also makes a return to the cover disc.

Adcock's 'alf page

Author: Mark Adcock



Two more additions to the 1K arcade now from regular **Mark Adcock**.

1K Tetris is fairly faithful adaptation of the Game Boy classic. To keep within the 1K rules, scoring is quite basic (just how many lines you've removed) and there is only one rotate key (cursor up – use the other cursor keys appropriately). Sound effects are even more basic, so perhaps it's time to dig out that CD of Russian folk music your eccentric aunt bought you last Christmas.

Feel free to customise the game – most usefully, **dropspeed%**, **downspeed%** and **horizspeed%** determine how rapidly the game progresses. For those interested in how a game can be crammed into such confined surroundings, the author tells all...

"I use text characters to plot the map. Then on top of that I plot the tetrad. Once the tetrad has stopped moving, it is added to the map. The whole grid is updated every loop, so no need for a CLS in the mainloop

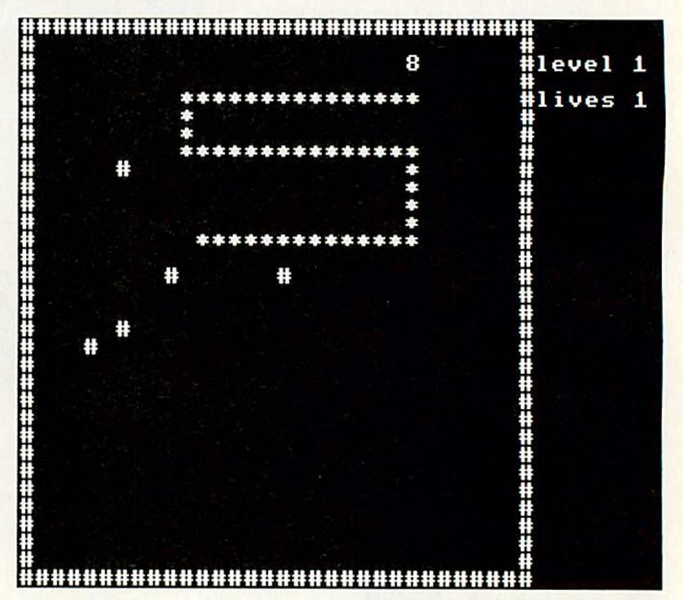
"The data for all seven tetrads at all four angles is stored within the code as a four by four bitfield. So if you put this end to end, you get a size of 7*4*2 = 56 Bytes = only 14 instructions. Because this is not a very easy format for the program to use, one of the first things it does is to unsquish this into memory. Basically, it takes each row of four bits, and puts it in the bottom four bits of a word. So to access the bit for angle a,coordinates x,y of shape s you use this formula:

```
bit(s,a,x,y) =(base_address!((s<<6)+(a<<4)+(y<<2))) AND
(1<<x)
```

whereas with the original squished method, you'd have to use:

```
bit(s,a,x,y) = ((base_address?(s*8+a*2+(y>>1)))>>((y AND
2)<<1)) AND (1<<x)
```

"The program does a **mov r13,#&A800** to get a stack. For subroutines called from the main loop, that don't call anything else, I use a **mov pc,r14** at the end. For all other routines, a **stmfd r13!,{r14} / ldmfd r13!,{pc}** is used. To exit the mainloop and quit the program, an **OS_Exit** is used"



And if *1K Tetris* has wet your whistle for all things wee, try *1K Nibbles*. Also known variously as *Snake* and *Worms* (must be National Worm Month), you must guide the creature around using Z, X, ' and /, gobbling the numbers while carefully avoiding the obstacles which include your own ever-lengthening tail.

Again, customisation is possible – **gamespeed%**, **lives%** and **tailgrow%** can all be adjusted with the expected results. The latter may need further explanation – when you eat a number, the tail grows by (1 << **tailgrow%**.

AU



All submissions if you please to...

***INFO, Acorn User, Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP**

or, e-mail us (including your real address please) at:

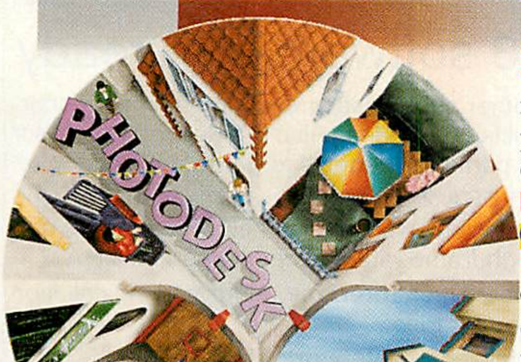
starinfo@acornuser.com

No e-mails longer than 100K please. Screenshots, background info and customisation ideas are always welcome.

Please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned. If you are responding to one of our challenges, please mark your envelope accordingly. *info submissions only please.

spacetech
imaging technology

Studio Quality Products for the Full-time Graphics Professional and the Dedicated Enthusiast



PHOTODESK 3 is the **LAYERS** package which defines studio quality image editing and artwork on RISC OS machines. It is easy to use but has many powerful features, including **LAYERS** and a sophisticated colour management system (CMS) for the full-time graphics professional. **£299.50 (£254.89 ex VAT)**

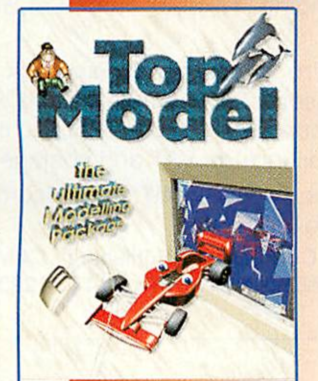
PHOTODESK2 is still available, retaining the CMS but not layers, now only £199.00 (£169.36 ex VAT)

PHOTODESK LIGHT, an economic alternative to PHOTODESK3 retains most of its creative features apart from the Colour Management System, Layers and some features essential to the professional user. **£134.75 (£114.68 ex VAT)**

Plug-in Effects Packs are available for all Photodesk packages. Each pack contains 10 special effects: **£19.95**

Purchasers of Photodesk 3 or Photodesk Light will receive a **complimentary CD-ROM** of useful resources, utilities and Tutorials. This CD is available to existing users for **£24.95.**





TopModel 2 the 3D editing package from Sincronia of Italy has been rewritten to include many new features including an easy to use interface and the fantastic **GEMINI** graphics engine.This package is particularly suited to artists and designers, because for the first time it is possible to model objects in a single 3D view. **£152.75 (£130.00 ex VAT)**

New Version of TM2 including NEW CD-ROM and NEW plugins: TopMotion, the long awaited animation suite, and Top3DFonts!



NEW!
Olympus C840 L
1280x960
NOW Only £499!
Olympus C1400L
1280x1024 SLR
NOW Only £799!

PhotoLink is an Acorn multi-driver for the most popular makes of digital camera. Cameras currently supported include the **new Olympus** range including the fantastic **C840L.** and the **C1400L SLR Zoom** Superb hard copy can be obtained via Epson or Canon **PhotoReal.** PhotoLink is available on its own at £69.00 or bundled FREE with a camera.

New Prices! C1400L £799.00 (was £1299) C840L £499.00 (was £599)

New Cameras! C1400XL High speed megapixel SLR £999.99

C900ZOOM Zoom megapixel compact with Optical AND Digital zoom £649.99



PhotoReal is the Acorn driver extension for the **Canon BJC4300, Canon BJC4650, Epson Photo, Photo700 and EX** printers with photo-realistic capability. PhotoReal makes use of the same advanced techniques for producing high-quality four colour separations as Photodesk and comes ready calibrated for the special dye-based inks used for photo-realistic printing. A calibration application is also supplied to allow you to tailor the results to your own specification **Driver only £69.00 Inc.VAT. or FREE if purchased with printer! examples: Stylus Photo700 £249.50. Canon BJC4300 £149.95 BJC4650 A3 £299.99. Epson PhotoEX A3 £454.73 (all prices inc VAT and Driver)**



NEW!

OHP A new presentation package on CD-ROM from Spacetech

Makes your slide shows quick and easy to create!

- Start building your presentation 5 minutes before the lesson? - No Problem
- Use your existing work in a presentation? - No Problem, just drag 'n drop it in!
- Powerpoint? - Forget it

Only £29.95 inc.VAT

Spacetech Ltd
1 The Courtyard, Southwell Business Park, Portland, Dorset, DT5 2JS, U.K.
Telephone: +44 (0)1305 822753 Fax: +44 (0)1305 860483
Email: sales@spacetech.co.uk Web : http://www.spacetech.co.uk

Making maths fun

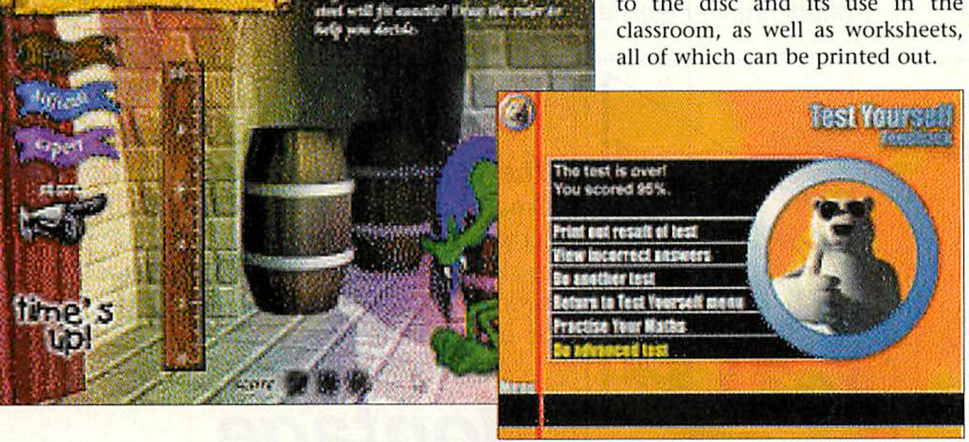
GRANADA Learning (previously SEMERC) (0161-827 2927) have released two titles which should help 7 to 11-year olds with their maths. **Practice Maths 11** is for 10 and 11-year olds about to take their SATs. As well as helping with test preparation, the CD-ROM also includes material teachers can use in the classroom. Covering the different question types encountered, the main areas of Number, Shape, Space and Measure and Data Handling have been divided into 15 topics.

Each question is supported by colourful graphics and clear narration. While teacher support materials, including a record of each pupil's performance and level of achievement, can be printed out from the CD-ROM.

Second to be released is **Maths Explorer II – Shape and Space** for 7 to 12-year olds. Set in a castle, this covers one of the main areas included in Key Stage 2 of the National Curriculum, and the Scottish 5-14 Guidelines.

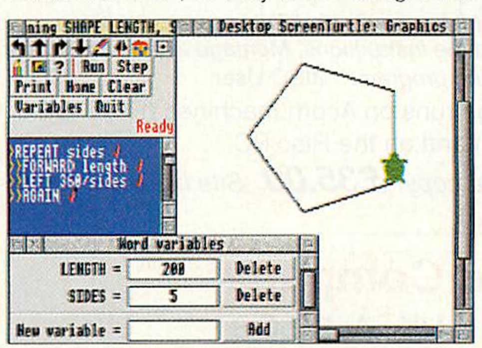
As well as exploring the castle children will learn about mathematical concepts related to shape and space. The subject is divided into 12 sections: Sides, Angles and Symmetry, Tessellations, Angles, Circles, Measuring, Scales, Congruent Shapes, Translations, Areas and Perimeters, Units and Conversions, Co-ordinates, Mirrors and Reflection, and Solid Shapes.

Furthermore, children can create their own projects by using the Notebook to collect text and images. A Logbook tracks the pupils journey through the rooms and their level of achievement. On-disc teacher support materials include a guide to the disc and its use in the classroom, as well as worksheets, all of which can be printed out.



ScreenTurtle 3

NOW it's even easier to bring turtling into your classroom with the imminent release of ScreenTurtle 3 from Topologika (01326 377771). The new version boasts all the best features predecessors: guessing what mistyped commands mean; friendly error messages that tell you what went wrong and how to fix it; dynamic word definition, so children can see their procedures come to life as they write; online help; language extensions like MOVE, DRAW and VECTOR to support the teaching of co-ordinates; multiple undo that encourages experimentation and many more pupil and teacher-friendly functions.



Still supporting Key Stages 1-3, Version 3 adds: project saving to provide evidence of children's work, parameters attached to procedures, scalable printouts, fully configurable toolbars, highlighted stepping through procedures to help debugging, and configurable point-and-click turtling for KS1. Prices start at £45 for a single-user version with a upgrade path of £15 + VAT + £1 for postage for Version 2, and £22.50 + VAT + £1 postage for Version 1.

What's on

BETT '99
13th-16th January 1999
Olympia Grand Hall
London

Information Communications Technology (ICT) For Primary Teachers
20th January 1999
Nottingham Trent University, Clifton Campus, Clifton Hall, Nottingham

NAACE
12th February 1999
Britannia Adelphi Hotel
Liverpool

New phonics for old

JUST when parents are getting their heads around phonics (letter sounds) as a tool to teach reading and the Chief Inspector of Schools is praising the Literacy Hour's use of the same for improved reading standards, news breaks of a new and better form of phonics.

Pioneered in Scotland this is known as *synthetic phonics* and research shows that children taught using the new method did far better than the *analytic phonics* advocated by the Government.

A one-year pilot study from St Andrew's University followed 300 schoolchildren in Scotland and showed those taught using synthetic phonics were seven months ahead with their reading and nine months ahead with their spelling compared to the Government's preferred strategy.

The technique is not new and has been used widely in Austria and Germany and researchers Rhona Johnston and Joyce Watson that 20 minutes a day is enough to significantly boost children's spelling and reading.

The new method involves teaching children just six letters at a time, one a day for six days, starting with S,A,T,I,P and N. The children are then shown how those letters can be combined to form words before learning another six letters.

Nursery re-think

BAD news for companies developing programs for nursery-aged children as the Government is reviewing what pre-schoolers and Reception-aged children are expected to learn and whether the more formal approach taken by the Literacy Hour is really appropriate. This is complicated by arguments that standards are no lower when children don't start formal education until they are 6-years old. Watch this space.

Can you program quickly?

THE British Computer Society is holding a competition for teams of up to five people all aged between 17 and 30-years of age. All you have to do is tackle – against the clock – programming tasks using C or C++. The closing date for entries is 25 January and prizes will be awarded to all competitors, heat winners and national champions. Full details are available from the BCS on 01793 480270 or email aduckworth@bcs.org.uk

Contacting me

You can contact the Education page by writing to me, Pam Turnbull at Acorn User, Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP or e-mail: educ@acornuser.com

All the fun of the fair

Pam Turnbull tries her hand at the Science Fair with Bert and Vicky

SCIENCE programs for under 7s are few and far between. If you want something which you can dip into when you're covering electricity, forces and motion, light and sounds, Earth and space, or daytime, night and the seasons this is for you. Based around the idea of a fun fair each of the different attractions takes one of these themes and explores them at two levels with one or two activities.

You start automatically on Level One but if you click the Options button you'll be presented with control over the volume, level and record keeping. I liked the layout of the records very much as it clearly presented which children had worked on which activity. You do have to make sure that children have signed in though rather than rush through the gates to try out the fair.

The graphics, voices and sounds are brilliant and there is lots going on with the fair full of people. I was a bit concerned that these would all animate when clicked, it would be nice but in a classroom setting plays havoc with trying to get children to work on their specific activity within a time limit. All that activate are the activities themselves.

The **Big Wheel** appealed to me as I had just been covering electricity with a mixed Key Stage 1 class. So jumped on to see where it took me. At Level 1 children were asked *What Needs Electricity?* with four different selections. This fitted well with practical work we had been doing in the classroom and the manual makes some suggestions and offers photocopiable resource sheets too.

But I was more impressed by the *Build a Circuit* and *Different Lights* games at Level 2. You don't have the problems of dead batteries to deal with though Sherston don't see the package as replacing practical science and I'd still recommend using a more hands on approach as well. *Different Lights* is supposed to show what happens when you add more bulbs to a circuit, but the difference in brightness was difficult to see and confused some of my Year 2s. Despite this I'd definitely use these for future work on electricity.

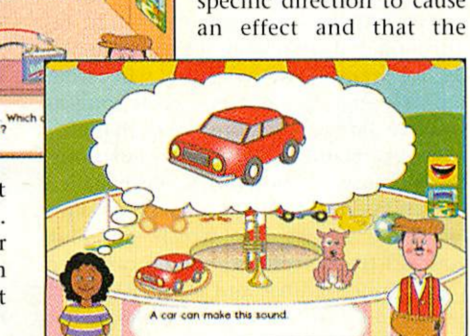
Moving on to the **Hoopla Stall** there is a game of *Sound Lotto* to play at Level 1. There are four sets of sounds from a piano to phone, bell to sheep. At Level 2 this changes to look at three instruments and qualities of sound. While the drum asks children to listen for loud and quiet, the piano looks for high and low and the violin for long and short notes. Unusual but useful.

Activities in the **Space Dome** ask children to decide which are the right items to place in two scenes in *Day or Night?* While in *What Comes Next?* they must put seasons in order. This is well supported by animations and shows well how deciduous trees change through the year.

Different knowledge is expected of Level 2 when children have to recognise the changes in positions of the Sun and Moon during a daily cycle. This did need some work especially with dawn and dusk but was good for building time vocabulary.

Shapes in Space is a little strange asking children to identify the Sun, Moon and Earth by their spherical shape. Children need to find the shape that should be in space. I suppose it helps children understand what three of the objects in space are called, but I'm still not sure about it.

Your two remaining visits at the Fun Fair will be to the **Fun House** and the **Bear Cave**. The former looks at force and in particular the use of push and pull before moving on to applying force in a specific direction to cause an effect and that the amount of force used is also important. Three nice games which help children use the correct scientific language.

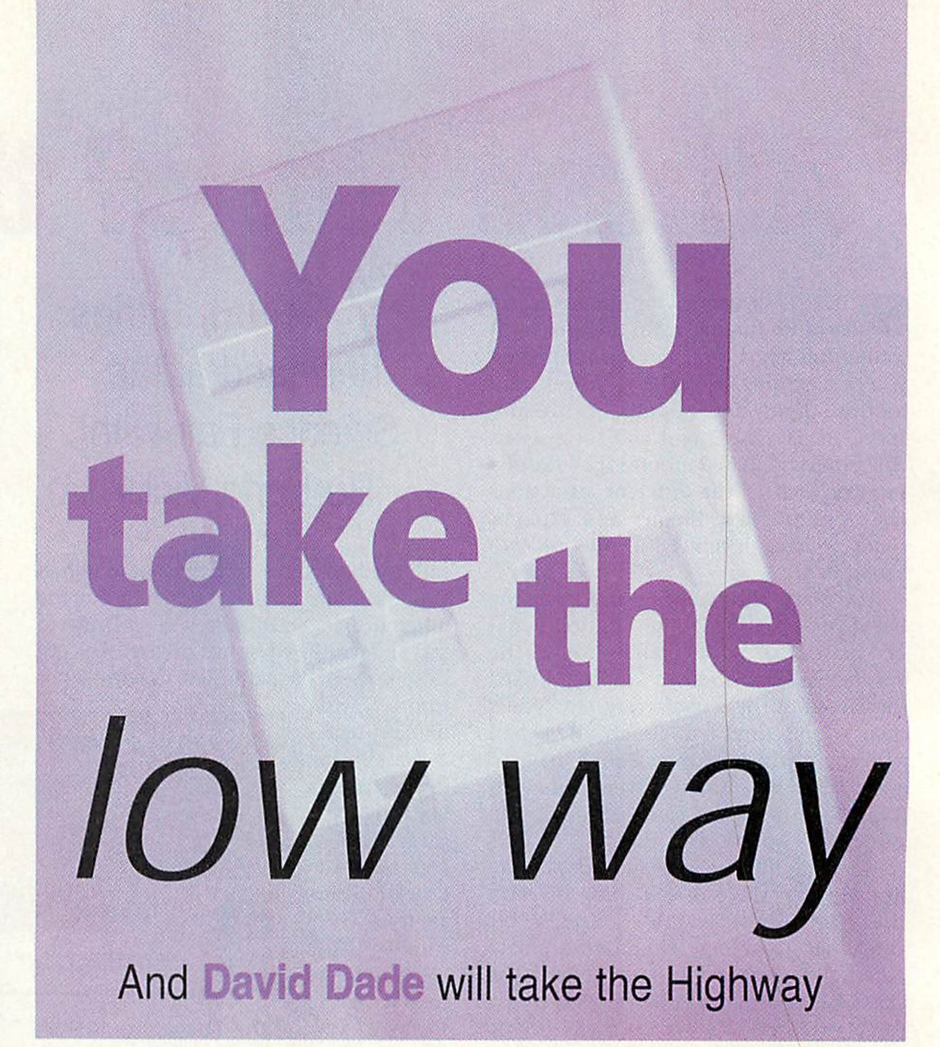


Finally the **Bear Cave** looks at light. Both levels deal with identifying light sources, but at the first you are adding light, at the second you're taking it away.

With some reservations this is a good classroom tool which lots of support for children within the package when they make a mistake. For teachers the manual has good suggestions for classroom activities. There are good cross-curricula links and the whole package takes a realistic approach to the way Science is taught in school. AU

Product details

Product:	Science Fair
Price:	£40
Supplier:	Sherston Software, Angel House, Sherston, Malmesbury, Wilts SN16 0LH
Tel:	01666 843200
Fax:	01666 843216
Ages:	5-7
Web:	www.sherston.com



You take the low way

And David Dade will take the Highway

If you want to know about BT's *Home*Highway, don't ask at the same BT Shop that I did. The second-hand-car-salesman type behind the counter who, according to the sign on the front of the store was supposed to be an 'Expert', told me "Well it sort of makes your phone go whoosh! Like in the TV advert. You get two lines, one is 128K and the other is 64K." At this point he thrust a poorly photocopied black-and-white sheet of paper at me and admitted, "I don't know much about it. Phone this number and they'll tell you everything you want to know." All he was right about was that he doesn't know much about it.

When you sign up for BT *Home* Highway, the copper wires that were your POTS line – Plain Old Telephone Service in phone engineers' jargon – are disconnected from the analogue exchange equipment and connected to a new gizmo called Super*port*128 developed by GPT, Britain's largest telecommunications manufacturer. GPT's device enables BT to establish an ISDN2e bi-directional dual 64kbps channel digital service over the original pair of wires from the exchange to your house, as long as you live 3km or less from the exchange.

Unlike standard ISDN2e installations, the Highway junction box that is installed also contains analogue decoders and telephone sockets into which you plug your existing telephone, so you can keep your phone number and all its BT Select Services like *1471* and *Call Waiting*. The two 64kbps channels are confusingly given three numbers. One of these is your existing telephone number; you get issued a new number for the second phone line you now have and the third number is for the digital port on the Highway box.

You can only make two simultaneous calls but they can be in any combination of analogue and digital. If you use both 64kbps channels for a fast 128kbps computer Internet connection, callers to your phone number will get the engaged tone. Otherwise, either analogue number (but not both at once) can receive or make calls while you're using one 64k channel for Internet surfing. That feature is pretty neat.

BT
BT Digital Access
Power LED
Power
Service
Digital LED
Phone Socket
BT
BT Line
Power Supply
1st Analogue Line
2nd Analogue Line
1st Digital Line
2nd Digital Line
Max. 1.8m
Max. 30m

The blue wallpaper is an optional extra

When the BT engineer calls to install *Home*Highway, your old main telephone socket is modified or exchanged, and the new Highway junction box is installed up to 30 metres from it. Ideally this will be near your computer where there's a spare mains outlet as the box needs power from its plug-in mains adaptor. You can have up to four extension phones on each analogue line, though if you have one phone in the original master socket and extensions are wired on from there, these will continue to work.

If you have a modem and an existing Internet service account, you can plug the modem into either analogue socket and continue to call your ISP as before, probably achieving your modem's full speed capability up to 56k if you're lucky. But that isn't what you bought *Home*Highway for is it? You will want to use the full digital 64k or 128k that's available, and for this you need some more hardware called a Terminal Adapter or TA.

A TA is the ISDN equivalent of a modem, except that now there is no need to convert your computer's already-digital data stream into audio tones as you do for the POTS system. Functionally a TA interfaces the data going to and from your computer to the protocols and data rates used by the ISDN network. For Acorn machines, the TA is usually connected to the computer's serial port just like a modem, and uses similar AT commands to dial and connect to an ISP or remote network. Some Acorn Internet software like the *ANT© Internet Suite* already has drivers for ISDN TAs in its configuration setup.

Modem setup
Modem: BTIgnition
Port: Internal
Speed: 115200
Dial prefix: 9.
✓ Demand-dialling of modem
Modem speaker volume: 1
✓ Redials, max 8 delay 15 sec
✓ Idle hang up 5 minutes
✓ Tone dial ✓ Log all calls
Close

ANT Suite setup for the BT Ignition TA

PC users are able to use the cheaper internal PCI or ISA card TAs costing

from £50+VAT, which can make 128kbps connections. Acorn users have to use an external TA, which limits the maximum data rate to 115200bps using the standard Risc PC serial port. External TAs cost about the same as a good modem, from £100+VAT up. The TA's network socket is connected through to the digital connector on the Highway junction box.

Using Ethernet networking and a combined Router/LANModem can allow Acorn machines to surf at the full 128kbps but at extra cost all round. The *D-Link* DI 106 Router/Hub costs around £200 inc. VAT. 3COM's OfficeConnect ISDN LAN modem costs about £50 more. 203,400bps fast serial port expansion cards by *Atomwide* or *Intelligent Interfaces* are another Acorn alternative way to get 128kbps with a simpler TA. Don't forget that if you use 128kbps channelling, you will be paying for two calls for every one connection.

What it costs

Call costs can also mount up invisibly when you use 128kbps. Some TA's and Routers can be set to bring up the second line only on demand, such as when you start to download a large file, and this will cost you another call unit every time it happens during your surfing session.

There's a BT charging option only available to *Business* Highway customers to reduce the minimum call fee from 4.2p to 2p a time. This costs £10 per quarter per channel, but can only be applied to both channels so you'd have to make 1100 calls per quarter just to break even on your £20 outlay.

BT *Home*Highway offers two payment options. You can either pay £175.08 inc VAT for conversion and then £27 inc. VAT monthly rental, or £116.33 inc. VAT for conversion, and £40 inc. VAT per month with a £15 per month call allowance. If you use up all of this allowance on the second option, the effective monthly rental is £25 inc. VAT.

Compare this with installing an additional analogue line which will also cost £116.33 for installation (there *are* half price offers from time to time) and £17.74 inc. VAT monthly rental for two analogue lines on which you might get 56kbps connections.

I find that the present state of the Internet is such that, even with an ISDN connection, much of one's online time is spent in waiting for remote servers to respond to your client software's requests. When the data does start to arrive, you get it more quickly, but waiting time is money. Calls are connected almost instantly though.

There's certainly a noticeable difference in the general response time from different ISP logins. Enterprise plc and others such as Freeserve, use a smart login server that detects an ISDN call automatically, and can accept 128kbps calls, but others like Demon Internet require you dial a different access number, but there's not usually any extra charge for ISDN access.

The alternatives

Alternative residential ISDN service providers are hard to find at the moment. At the time of writing *Cable and Wireless* only offer Business ISDN, but it compares rather well to BT *Home*Highway. A C&W ISDN line costs £99+VAT for installation, and £28+VAT per month. You get the same two ISDN2e 64kbps channels and two new numbers, but no telephone sockets as standard.

This isn't a problem though, as many reasonably-priced external TAs have two phone sockets you can set up to respond to calls to the two numbers and into which you can plug in analogue phones, modem and fax machines.

Cable and Wireless' cheaper call costs of 3.1p per minute daytime and 0.8p per minute evening (all +VAT) might offset the higher monthly rental. If you're not in a Cable and Wireless-served area, they offer an Indirect service whereby a third party such as BT does the actual ISDN installation, but you pay C&W for the service.

TeleWest just had a Christmas introductory offer last year of business ISDN2e installation for £90+VAT and £25+VAT monthly. Most cable telephone companies were very cagey at the time of writing about both domestic ISDN and Cable modem installation offers. This may indicate some forthcoming stiff competition.

Cable modems use the intrinsically-higher bandwidth of the cable TV network to offer Internet access at much higher speeds than ISDN, which together with ADSL, another high-speed wire connection technology being trialled at the moment by BT, herald the prospect of 'Always On' Megabit per second Internet connections. These systems will probably require subscribers to pay for the data transferred rather than the time online.

Whether you go for ISDN now or wait for Cable modems and ADSL, you can be sure that UK subscribers will be paying more than European and US customers for Internet connection. Now could be the time to complain, but don't bother the salesman in your BT Shop. AU



A pair of D-Link DI 106 Router/Hubs

This PCI ISDN card won't fit a Risc PC

ZyXEL's Elite ISDN TA – a stunning design?

Hayes ISDN TA in a box

The curvacious ZyXEL Omni TA128

Back Issues

Back issues

Missed out on one of our previous issues? Now's your opportunity to bring your collection up to date. But hurry – stocks are limited



Issue 203 – January 1999
- Rhapsody 4
- AddressIT
- Speakers reviewed
- Film Trailer CD

Issue 200 – November 1998
- CD Writers
- Relational databases #2
- History of Acorn User
- Another great cover CD

Issue 201 – December 1998
- Photodesk 3 review
- Pocketbook in Asia
- Personal Accounts 4
- Sunburst review

Issue 202 – Christmas 1998
- Writing Java
- Creating AUCD4
- RCS code cracking
- WimpWorks vs WimpBasic

Issue 193 – April 1998 SOLD OUT
- TextEase
- DrawWorks Designer
- Impact Pro
- raFS on disc

Issue 194 – May 1998
- Doom special
- Acorns over Egypt
- Newsreader review
- R-Comp interview

Issue 195 – June 1998
- Printers reviewed
- SEMERC success story
- Automating your home
- Wizard Apprentice on disc

Issue 196 – July 1998
- Phoebe 2100
- New portable
- Show report
- TraxSequencer on disc

Issue 197 – August 1998
- New Medi computer
- Audio speakers tested
- Quality printers
- Web FX3D reviewed

Issue 198 – September 1998
- TopModel step-by-step
- ANT Internet Suite made easy
- Desk utilities
- Stellate demo on disc

Issue 199 – October 1998
- Acorns and Blake's 7
- Relational databases
- Slow Scan TV
- Radio pictures on disc

Order form

- [ ] Issue 203, January 1999
- [ ] Issue 202, Christmas 1998
- [ ] Issue 201, December 1998
- [ ] Issue 200, November 1998
- [ ] Issue 199, October 1998
- [ ] Issue 198, September 1998
- [ ] Issue 197, August 1998
- [ ] Issue 196, July 1998
- [ ] Issue 195, June 1998
- [ ] Issue 194, May 1998
- [ ] Issue 193, ~~April 1998~~ SOLD OUT

UK: £3.95 per issue
Europe: £4.95 per issue
Rest of World: £6.95 per issue

Name ....

Address ....

....

....

.... Postcode ....

Tel No ....

Send cheques payable to Tau Press Ltd to:
Acorn User Back Issues, Media House, Adlington Park, Macclesfield SK10 4NP

All prices include P&P

- [ ] *Please tick if you do NOT wish to receive mailings from other companies*

Please allow 14 days for delivery in the UK

Acorn User Free Ads Service

Why not take advantage of our free reader ad service? Fill in your details on this coupon (25 words maximum, one word per box below) and send it to Free Ads, Acorn User, Tau Press Ltd, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: freeads@acornuser.com. Only one ad per reader please. Although we try to publish every ad we receive, we can make no guarantees; publication is entirely dependent on space and time constraints. We may also publish free ads on the cover disc if magazine space is short. Please fill in your name and telephone number below – these will not be published, but they enable us to contact you in case of any queries. Please include your town/county in each ad to help other readers with their purchasing decision.

Free ads are on page 56

Your name: .... Telephone no: ....

It's about time

Mike Cook explains why older machines are better

You might think that modern computers are much better at doing everything than those early 8-bit machines but there is one application that was easy on old computers and virtually impossible on new ones and that is timing. That is to say, measuring the time interval between two events. It's not so bad if the events are widely spaced and you only need the measurements in fairly coarse units of say a couple of hundredths of a second but if you need to time accurately to less than a millisecond then you are in trouble with today's systems.

The problem, you see, is interrupts: modern computers rely on them to function and some can't even be switched off. For example interrupts are what keep the image on your screen, small slivers of time are stolen to fill video buffers or sound buffers or update real time clocks or to herald the arrival of key presses or serial bytes. What chance does a simple timing program have?

In the old days it was simple to time events, shut off all the interrupts and then go round in a loop incrementing a counter until the event finished. Then, by knowing how many clock cycles were taken going once round the loop you could work out the time from the value in the counter. Try that nowadays and you will get different counts for the same time event because the CPU has been summoned to do some other task in the middle of the loop.

Fortunately this is a job that can easily be delegated to a slave PIC system that can inform the main computer when it has finished. Not only can you use this system as a timer but you can also use it as a frequency counter.

With signals, timing and frequency are related, they are simply the reciprocal of each other. Reciprocal is the name given to the operation of 'one over' something when you want to sound as if you know what you are talking about. So a signal with a frequency of **F** that completes a single cycle in a time T has the two quantities related by:

```
F = 1 / T
```

or conversely:

```
T = 1 / F
```

So measure one quantity and you have the other, but how is that done? There are fundamentally two different ways to measure the frequency of a signal. One is to measure the time it takes to complete one cycle, as shown in Figure I. This is quick as the result is ready in one cycle's time but it also places the highest accuracy demands on the measuring system.

The other way, Figure II, is to count how many cycles of the signal occur in a specific time interval or gate period, the longer the interval the more accurate will be your measure. This method gives you the most accurate result, especially if the gate period is long, but that result isn't instantaneously available. Worse still, if the frequency is varying this method gives you an average frequency over your time interval. Well, the best results can be obtained if you use the most appropriate strategy for the job in hand, and the PIC system makes that possible. By having the PIC do the measurement the computer can command what method to use and even intelligently change the method to suit the current situation, a sort of auto-ranging system.

Let's look at what hardware you need. For a start there is the basic PIC circuit shown in Figure III and if you are content with measuring logic signals that is all you need. However, in practice you might want to measure a variety of signal amplitudes. To cope with large signals you need two clamping diodes and to cope with small signals you need some sort of amplifier.

One such arrangement is shown in Figure IV and is somewhat a Rolls-Royce affair consisting of a high gain amplifier followed by a variable gain amplifier and finally feeding into a comparator with some hysteresis. Some modes of operation in this project measure the interval between two signals on inputs A and B so for the full circuit you will need two of these amplifiers.

Note there is AC-coupling in the circuit, this is so that the DC offset of the previous amplifiers is not amplified causing the whole thing to lock up. Therefore, there is a lower frequency limit to the signals you can

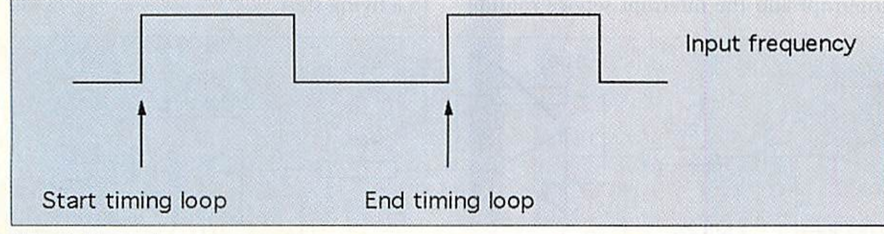


Figure I: Measuring a single cycle of a waveform

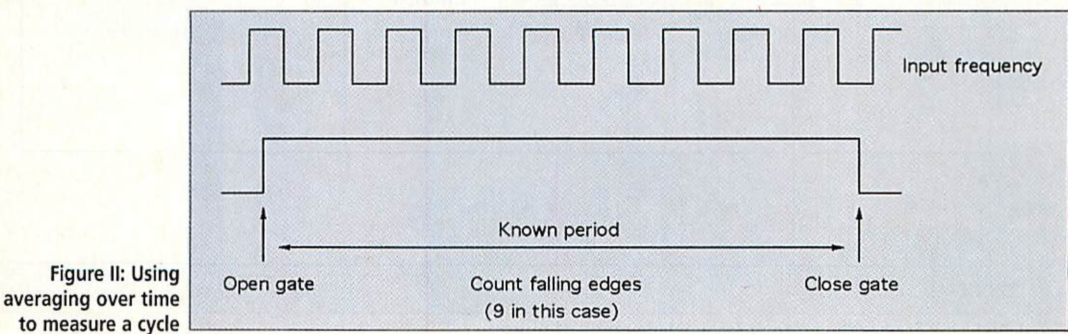


Figure II: Using averaging over time to measure a cycle



measure, the exact value depends on their amplitude. If you do want a DC-coupled system you can remove the capacitor but you will have to reduce the gain of the first stage by reducing the value of the 1M resistor. Note that the low power LED in Figure III is not used in this project but the code could be altered so that it is used as a *measurement in progress* indicator.

The PIC controller works in the same way as in previous projects, that is it waits for a command number, executes that command and then send some bytes back to the computer. By doing this it is an easy matter to extend the number of commands it contains. The basic command engine is done a bit more efficiently this month as you can see if you look at the PIC source code listing.

Basically when a byte is received it is checked to see that it doesn't exceed the maximum command number, then it is added to the value in the program counter. This has the effect of performing a computed GOTO and is followed by a list of real GOTO instructions that directs the PIC to the code to handle the command. To add extra commands simply change the maximum command number and add an extra GOTO at the end of the list.

The first set of commands measure the time of one cycle to either 16-bits or 32-bits; two resolutions are provided because maintaining a 16-bit counter is quicker than a 32-bit one and so the timing is a little more accurate. In order to make sure the timing starts at the beginning of a cycle the program holds until it sees a high input and then holds until it sees a low input before it starts incrementing a counter during both the low and high sections of the input.

Now this has the potential for hanging up the system because if there is no input signal the PIC program loops forever. It is possible to have a counter that doesn't count up but starts at a big value and counts down. Then you could arrange things so that if it reaches zero it will send this back as a sort of time-out state.

The downside to this is that as you have to test the counter for zero each time the basic time it takes to go round the loop is increased and hence the measure of time is coarser. There is plenty of room in the program memory to add this sort of mode into the project. Alternatively you can put a push-button reset switch between pin 4 of the PIC and earth to stop any latch up manually.

The next two commands do the same thing, except they start timing on an edge of input A and stop the timer on an edge of input B.

Finally the counter mode uses the timer/counter in the PIC controller. This is initially set to zero and it counts down until it reaches zero. This is because when a count of zero is decremented it wraps round to &FF. So if you start at zero it takes 256 counts before it reaches zero again. When it is decremented to zero it generates an interrupt and the interrupt service routine decrements a gate counter. The main program just counts falling edges until the gate counter reaches zero. To make things more flexible this gate counter can be set by the controlling computer so that you can count cycles for a short time or a long time according to the trade-off between accuracy and speed.

For a full list of commands see the read me file on the disc. There is also a simple BASIC program to just send commands and display the results. Therefore, this project is ideal for those of you who want add, extend and write your own desktop application for an examinable course. A desktop adaptive frequency meter would be sure to impress any examiner. You could customise it for specific applications, for example the obvious one is as a musical instrument tuner. Anyway there should be more than enough here to get you off to a flying start. AU

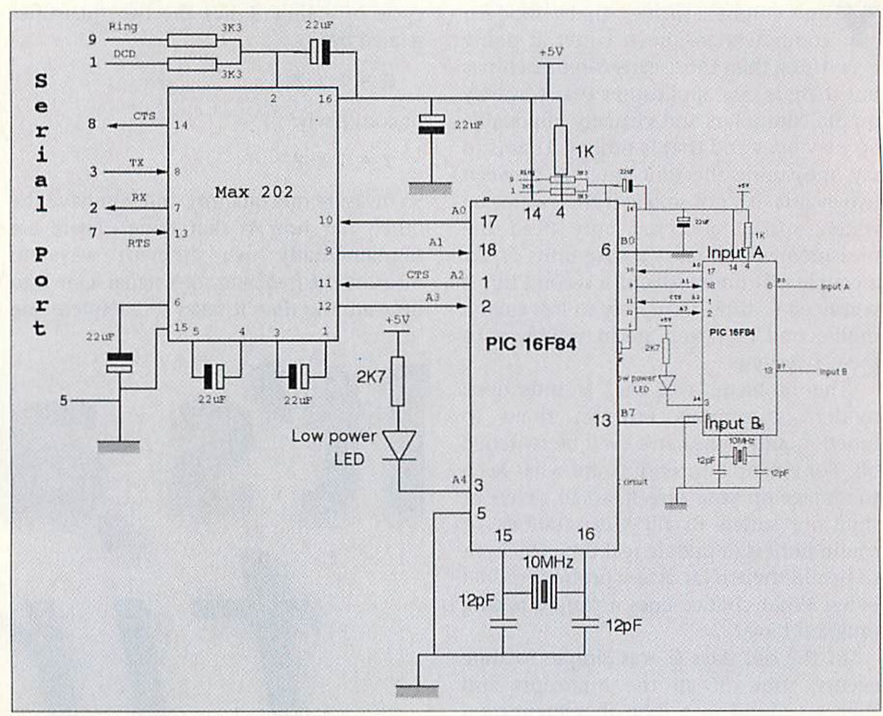


Figure III: The basic PIC circuit for timing things

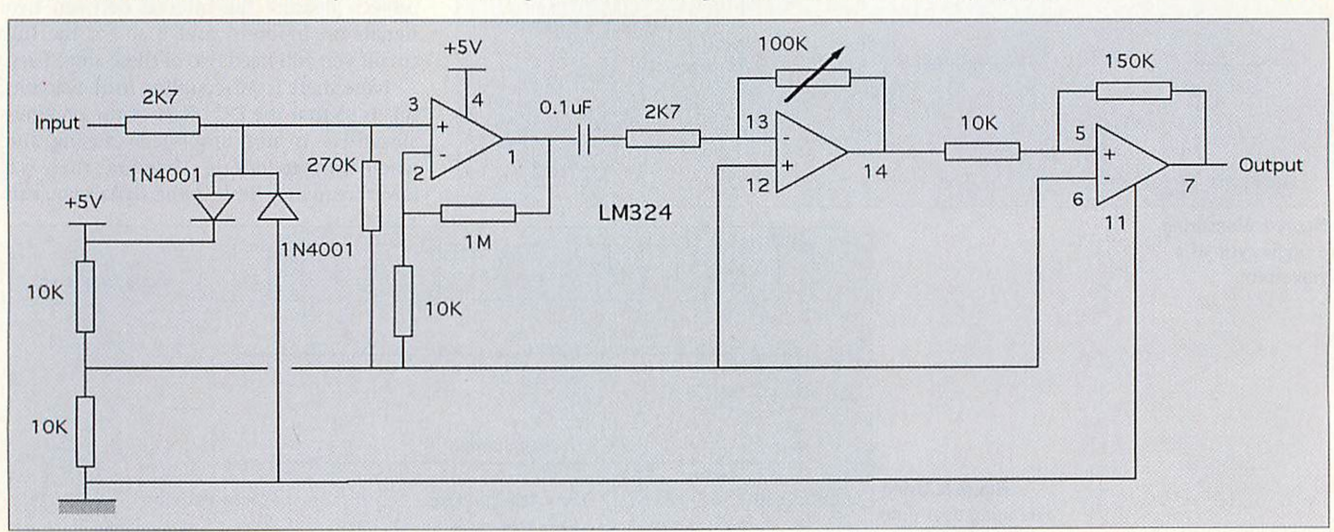


Figure IV: Circuit for handling signals from a wide range of sources

The Acorn Software Network

Business and Utilities

Ant Internet Suite II	110.51
ArcFax	35.00
ArcFS2	29.37
ARCshare	49.95
Artworks	104.69
CD Burn	58.75
Complete Animator	94.05
DataPower 1	110.00
DataPower 2	166.32
DaVinci 90	81.08
Digital Symphony	56.95
Disc Doctor	28.45
Disc Rescue	45.00
Draw Works Designer	31.50
EasiWriter Professional	143.99
Easy C++	116.32
EasyFont Pro	59.95
Eureka 3	110.51
FastSpool+	17.62
Fireworkz Pro	166.31
Font Directory Pro	65.00
FontFX6	29.95
Game On! 2	15.00
Holy Bible (Illus.) BP(KJV)	82.25
HTML Edit 4	53.00
ImageFS 2	44.59
IMaster & TWAIN Driver	35.00
Impact Pro	139.53
Impression Publisher	136.41
Impression Style	83.54
MelIDI	129.00
MIDI Synthesizer	46.94
Midi Works	151.95
MovieFS	29.95
Ovation Pro	158.62
P'rllel port Zip driver (Argo)	34.08
PC Pro2 (+PC Exchange)	46.55
PC Sound Professional 2	40.00
Personal Accounts V4	49.00
Photo Link	65.55
Photo Real (Canon/Epson)	65.86
Photodesk 2	256.02
Photodesk plug-ins (call)	18.95
ProArtisan 24 (RPC Only)	89.95
Prophet 3	179.77
Rhapsody 4	94.95
Schema 2	121.50
Sibelius 6	116.00
Sibelius 7	699.00
Sibelius 7 Student	345.00
Sleuth 3	116.32
SparkFS	25.00
StrongGuard	25.00
Studio Sound	113.95
Tablemate Designer	60.00
TechWriter Professional	222.12
TopModel 2	145.11
Turbodrivers (Can/HP/Eps)	54.69
WebSpider	40.00
WebTool for ANT Suite 2	29.38
WIMP Basic	44.99
Win95FS	41.12
XStitch 2	35.00

Education

Animated Alphabet, Talk	33.43
Arc Venture (various)	39.01
Aztecs, Age 7-11	50.17
Best Four Maths	46.41
Calabash Pirates	25.98
Crystal Rain Forest	50.17
DataSweet 3	69.33
Dazzle +	83.71
Dinosaurs	13.49
Doodle	32.37
English (10/10)	13.49
Essential Maths (10/10)	13.49
Essential Science	13.49
Expl with Flossy the Frog	28.79
First Logo	29.02
First Words with Smudge	25.98
Freddy Teddy's Adventure	23.50
French (10/10)	13.49
Fun School 3/4 (various)	24.99
Geography (10/10)	13.49
German (10/10)	13.49
Granny's Garden	28.79
James Pond Run. Water	27.00
Maths (Geometry) (10/10)	13.49
Maths (Number) (10/10)	13.49
Mega Maths	24.99
Micro Maths	24.99
My World 2 + 2	54.70
Naughty Stories Vols 1-6	44.65
New Teddy Bear's Picnic	36.78
Nursery Rhyme Time	33.43
Oxford Reading Tree 3	44.65
Pendown DTP	65.85
Playdays age 3-8	23.40
Playground (Freddy teddy)	23.50
Smudge the Spaniel	25.98
Spelling & Punctuation	13.49
Splosh+ (1-5 users)	51.70
Table Aliens	27.85
TinyDraw/TinyLogo	29.37
Tizzy's Toybox	47.94
Watch Magic Grandad	30.13

Games

Alone in the Dark	34.99
Anagram Genius	20.00
BHP Brutal Horse Power	28.49
Birds of War †	30.00
Black Angel	30.00
Break 147 & S'pool †	27.00
Carnage Inc.	22.50
Chocks Away Compend.	25.00
Cobalt Seed	23.74
Crystal Maze, age 7+	28.45
Cyber Chess	31.50
Darkwood	20.70
Demon's Lair	20.00
Drifter (DD/HD)	31.50
Dune II (CD - £31.50)	26.60
Dungeon †	27.00
E-Type 2 †	30.00
Eclipse Collection	22.49
Enter the Realm	25.00
Exodus	25.00
Fire and Ice	23.39
Formula Two Thousand	23.74
Global Effect	27.00
Groundhog	12.00
Haunted House	25.00
Holed Out Compendium	20.00
James Pond 2+	16.20
Krysalis Collection (NRPC)	29.99
Logic Mania	27.00
Pandora's Box	25.00
Patience Addict	19.95
Play It Again Sam 3	24.95
Play It Again Sam 4	35.00
Pushy (Shovy)	12.00
Real McCoy 2/3/4 (each)	35.00
Real McCoy 5	31.50
Rick Dangerous	15.26
Saloon Cars Deluxe	31.50
Scrabble	26.59
Shuggy	25.95
Silver Ball	12.00
Simon the Sorcerer	27.00
Small †	21.20
Spobbleoid Fantasy	30.00
Stereoworld	22.50
Stuntracer 2000 †	35.00
Tanks	25.95
The Time Machine	25.00
Virtual Golf	31.50
Wavelength	13.50

CD Business & Utils

Arm Club PD CD 1	19.00
Arm Club PD CD 2	15.00
Artworks	104.69
Artworks ClipArt 1 or 2	20.08
Bitfolio 7	42.74
Font Emporium	29.95
PDCD4 (Datafile)	15.00
PDCD5 (Datafile)	15.00
ProArtisan 2	98.93
Risc Disc Vol.1	15.00
Risc Disc Vol.2	20.00
Risc Disc Vol.3	25.00
Rob Duncan Cartoon Kit	42.74
Task Force Clip Art	33.20
Tekkie Disc (PRM's etc)	47.50

CDROM Education

Ancient Egyptians	42.30
Ancient Lands	50.53
Anim Talking Alphabet#	33.43
British Isles from the Air	42.30
Castles	42.30
Crystal Rain Forest 2	50.17
Dangerous Creatures	50.53
Dinosaurs	50.53
En Route	89.29
Era of the 2nd WW	81.08
Eureka Discoveries & Inve'	42.30
Garden Wildlife	42.30
Guardians of Greenwood	58.16
Hutchinson's Encyclopedia	52.82
Illustrated Shakespeare	29.32
John Cabot & Merchant V.	42.30
Kingfisher Micropedia	76.38
King Arthur	58.69
Kiyeko with Acorn reader	36.43
Map Detectives	50.17
Musical Instruments	50.53
My 1st Incrd. Amaz. Dict.	41.13
Number Time 2	28.99
Oxf. Talking Infant Atlas	22.32
PB Bears Birthday Party	41.13
Perspectives Francais	81.08
Rocks, Min's & Fossils	81.08
Romans	42.30
Science Explorer	66.96
Seashore Life	42.30
Science In Action	13.73
Settlements	81.08
Space Exploration	13.73
Survival: Mysteries of Nat.	42.30
The Way Things Work	50.53
The World's Weather	52.87
Tizzy's Toolbox	44.65
TOTS TV	19.95
Ultimate Human Body	50.00
Understanding the Body	42.30
Vikings	42.30
World of Robert Burns	93.94

1500 titles Available!!

Some dealers may not stock all titles

Minimum delivery £ 2

Credit Cards and Official Orders welcome. E&OE

All Prices Include VAT @ 17.5%

CDROM Games

Abuse	25.00
Ankh	25.00
Crystal Maze	28.45
Doom Trilogy	35.00
Dune II	31.50
Heroes of Might & Magic II	35.00
Simon the Sorcerer	32.40
Syndicate	29.00
Wizards Apprentice	24.95

New Software

OHP Presentation

Editor and Viewer for full-screen presentations on a RiscOS computer

(RiscPC/A7000(+))

£29.95

Coming Soon...

Cerilica Vantage

The Ultimate RiscOS vector art system, essential upgrade to all serious Artworks users

£ T.B.A.

Key :

NRPC Not for RPC

† Separate RPC version

Many titles abbreviated for advert

Order from a participating dealer

Uniqueway
Tel 01222 464020 Fax 01222 440071
email sales@uniqueway.co.uk

Liquid Silicon
Tel 01592 592265 Fax 01592 596102
email liquid@cableinet.co.uk

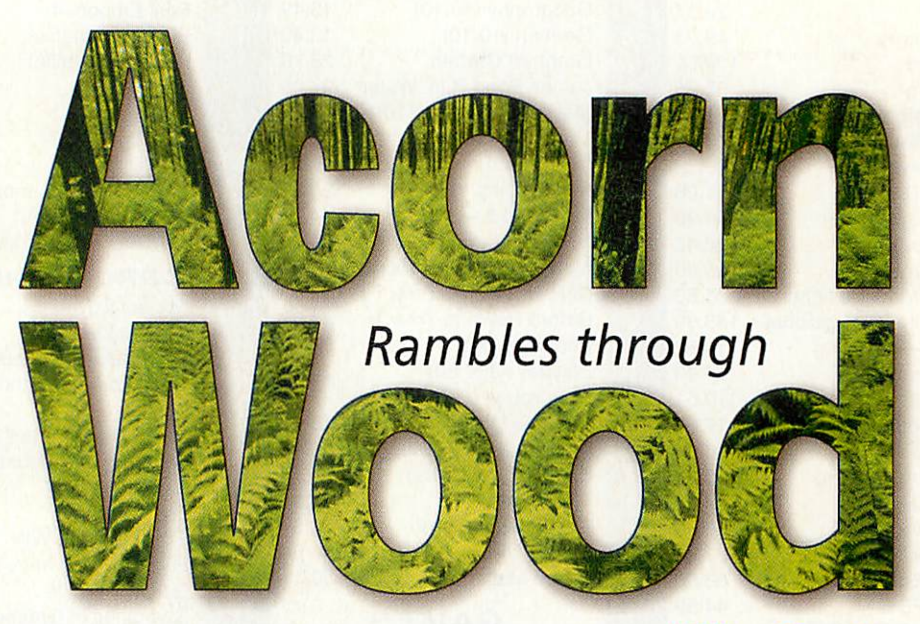
Davyn Computer Services
Tel 01924 254800 Fax 01924 254036
email sales@davyn.demon.co.uk

The Data Store
Tel 0181 460 8991 Fax 0181 313 0400
email sales@datstore.demon.co.uk

CJE Micro's / NCS
Tel 01903 523666 Fax 01903 523679
email sales@cje.co.uk

CTA Direct
Tel 01942 511000 Fax 01942 749325
email sales@cta.u-net.com

Revision 10b



Acorn Rambles through Wood

More solutions from the tour guide, **Mike Cook**

The story so far... Acorn, while failing to persuade enough people to buy the best computer in the world, have given up trying and are attempting to off-load responsibility for the operating system support to interested third parties. Now the evil William Fence-Door sits back and gloats seeing his war of attrition come to fruition and dreaming of the day coming soon when he will rule the world and then no more new stuff ever *har har har har*

Meanwhile, mild mannered Mike Cook having escaped the clutches of one of the worst Universities in the land comes to grips with soldering incredibly close-spaced legs on very large surface mounted components wearing his new power specials, now read on...

From the depths of my electronic post bag comes this little poser that appears to have become detached from its author:

"I'm encountering problems with my Risc PC motherboard. My computer fails to accept my PC Card – 486-40 Mk II card from Acorn/Aleph One – with the StrongARM installed. I have tried to use it with various versions of the PCx86 software, up to the most recent beta releases 2.xx. Without the StrongARM and it runs perfectly.

"I have tried various combinations of my PC card, my StrongARM, my brother's StrongARM (first batch, 200MHz) and my brother's PC card (same as mine). Not a single combination works in my computer and they all work perfectly in my brother's. I have even unplugged my CD-ROM drive, as I was told by some Acorn guy who presented the Phoebe at Acorn Expo 98 in Holland that Acorn's CDFS CD-ROM drivers are somewhat problematic.

"My Risc PC is a former RPC700, my brother's a former RPC600 (second generation 603). I was told by a German Acorn dealer, from whom I bought my computer, that a solution could either be a straightforward one, which would be included in the warranty, or a rather expensive one, consisting of a plug-in card that does something to the bus signals, and he couldn't tell me which one would solve my problem. I was hoping you could give me a more definite diagnosis, so that I can decide what to do. I'd be really grateful if you could say something on this."

If one repair is included in the warranty I don't see why any repair should not be included, at least that would be the case under UK consumer legislation. From your description I would say that it is definitely the motherboard that is faulty and would appear to need replacing. Just because it operates with less than the maximum possible expansion does not mean that it is "fit for the purpose for which it is sold", which is the guiding sentence in consumer affairs.

There is a newer version of the PC software but I don't think that will solve your problem. If this has come to light in the first year of purchase you are entitled to have it replaced. I have not heard of other instances of combinations such as yours failing, has anyone else?

Howard Thompson from Huddersfield has been dabbling with a PC on the Internet, he writes:

"I have downloaded several applications from the Internet using the dreadfully slow old PC's at my college, when I transfer them to my faithful old A3010 some of them fail to unpack or don't work correctly. Could this be because I have transferred them from a PC?"

Sorry you can't blame Bill for this one. If it unpacks but fails to work properly chances are that the application was not too good in the first place. Some software put on the net is of very poor quality with the authors thinking that as it works on their system it will work for anyone. This is simply not the case for all sorts of reasons, I have seen code that has absolute reference to filenames, directory structures and filing systems embedded in them.

Another common error is to assume that all computers have some automatically loaded utility in them like a long filename facility. These have been on the authors machine so long that they forget not everyone has them. It could be that the applications require you to reserve system sprite memory, a sure sign of a beginner.

Despite Acorn machines being wonderfully supportive of old hardware and operating systems it does take a certain professionalism to be able to produce an application that works on all systems. Some problems of compatibility can't be foreseen, especially applications written before the advent of StrongARM processors.

Failure to unpack an application can be caused by several factors, the most common being downloading in 7-bit or text mode when you should be in 8-bit or data mode. Modern software tries to guess which it should be from the filename or context but it doesn't always get it right. Another problem could be caused by a mismatch between the compression system and your decompression software.

It's not as easy as always keeping the latest version of this software as sometimes older versions will work where new versions will not. However, most internet software has an author associated with it so try an e-mail or even writing a letter to them. They might not be able to solve the problem but it will make their day knowing someone is interested in their application.

Next here is proof that Acorn's influence stretches across the pond, Rick Casson from Canada wants to know about digital cameras.

"I am thinking of buying one of the new Sony digital cameras and have been allowed to try the camera out and have found it gives good quality JPEGs which can be imported to *!Paint* and *!Draw* without too much problem.

"My question is this: In the DOS format which you get them in from the camera there is a second hidden DOS file for each picture. I assume this contains the info about the special effects the camera is capable of creating, date, and so on. Is this DOS data converted along with the JPEG? Can it be used by any of the photo-processing programs such as Photodesk? Can the JPEGs be loaded and edited directly by the Photodesk program?

"Could you make some comment on the floppy disk system against the more prevalent method of downloading you images via a cable. I realise one apparent benefit is the ability to use the camera with a cable to put you picture directly onto a TV screen for viewing but I'm not



sure if Spacetech's *PhotoLink* is NTSC compatible for we North Americans.

"As you may have guessed I live in Canada. My system is at present a StrongARM Risc PC with an SLX33 PC Card which I hope to upgrade in the near future to a 586-100 or -133 card with a 512K cache.

"My printer is an Epson Stylus Colour 800 (1440 dpi max) My interest is in DTP using *Impression Style* although at present I am considering moving up to either *Impression Publisher Pro* or *Ovation Pro*. It is very hard to get knowledgeable advice on anything but Windows 95 (yech) in Canada. I am forced to use it for compatibility but I find it is a cumbersome and top heavy system."

Some months ago I had a promotional floppy disc from Sony with some images on but I couldn't get any sense from it on my Acorn nor my Mac, so I just reformatted it. However, I did hear that there are now PD utilities to enable you to get the information off these discs and I believe that they are now supported by Spacetech. I am not sure what is in these second hidden files but I doubt if they are incorporated into the JPEG image files, there's nowhere for them to go except perhaps in the comment area.

As to the method of transfer of picture to computer I think you are getting a bit confused. Not many cameras will display the image on a TV set without extra hardware, using a cable is normally some sort of serial connection to transfer the compressed data to the computer therefore your NTSC system will have no bearing on Spacetech's *PhotoLink* software.

Anyway NTSC (Never Twice the Same Colour) only applies to domestic TV systems, it doesn't affect computer monitors. As to the relative merits of storage for cameras, discs have the advantage that you can simply and easily change them to allow you to take more pictures before you have to touch base but it does make the camera larger and it takes more power spinning the disc than it does to store them in 'flash ram' so the battery life is shorter. Some cameras have removable RAM cartridges allowing you to take more pictures before you download but these tend to be more expensive.

Now remember in the Christmas issue (Tony) John Penton had an ingenious alarm clock and I asked if the fan kept him awake, well he replied:

"Yes, the fan did keep me awake, at least until I got used to it. I had to turn the computer off during exam term, so I could get to sleep quicker. It was worse when the bearing went funny and the fan was really noisy. However, this year I'm fortunate enough to have two rooms, so: computer in living room and speaker and remote in the bedroom.

"Another thing you might be able to help me with my next project. I have been thinking of building the DMX512 controller you described, since I frequently use effects lighting which is controlled this way, and the controllers I use are not very good. However, in effects lighting, speed is quite important, so to have the computer trying to run the DMX and the controlling software would be a bit much (on my ARM610).

"Fortunately, your latest articles have provided a possible solution: PIC. What I envisage is the PIC loading commands from the computer and then looking after the timing of sending out the DMX signals (via the UART?).

"What I'd like to know is how big is the serial buffer on the Risc PC? Can the software write the changes to the serial port, where they would stay in the buffer, until the PIC got round to it? This would also enable only the changes to be written by the software – the PIC could store the full byte sequence and update it as necessary. What do you think? Would an ARM610 cope with sending bytes to the UART (I could use full byte loading) and running a complex graphical controller too?

There does seem to be a lot of interest in DMX lighting controllers at the moment however you don't need to go to the complexity of a PIC controller. It is doubtful if you would save any time as the serial buffer is such that lifting the handshaking lines on a buffer lets two bytes through at a time not one. Therefore, you would have to arrange at least two byte commands to change a parameter and then have the PIC send a frame of data.

The DMX system is inherently inefficient because if you want to change just one light you have to send a command to all the others as well with no change in their data. In the time taken sending the bytes to the PIC you might as well send them to the DMX system as they are both serial.

The standard serial output buffer is 191 bytes long but you could write your own using the buffer manager SWIs **Buffer_Create** or **Buffer_Register**, you can implement your own buffer and make it as big as you like – there are PD utilities available that will do it. Most professional lighting rigs I have seen at really big gigs are run from a Mac but there is the occasional PC so there is nothing to feel inferior about the horse power in a Risc PC.

The trick to efficient use of the DMX standard is to only have a transmit frame long enough to take the maximum number of lights you are using at the time. If you do want to light anything bigger than a Manic Street Preachers gig you are in the league where you can afford to buy two computers.

While Graham Brooker was recovering from an operation he was musing about the possibility of talking to the enemy:

"It looks as though I may be in the position of giving house room to a Windows PC in the fairly near future, but it would be my intention to keep the old A7000 for as long as it continues to work. Could the two of them be networked together, just so that they could see each others hard drives? Much more fun than switching files using floppies."

This is something that should be a lot simpler than it is, you could connect the two using the printer ports or even the serial ports and transfer data at a decent speed. However, the snag is the software that has to run at each end to make it work. This software is built into all Macs so sharing files and folders between Macs is a simple matter of just hooking up the serial ports.

Most file sharing software is designed to work over specialised network hardware like Ethernet where many computers can be connected together. Fitting two such interfaces into your machines is quite an expensive option. You could delve into the TCP/IP protocol and direct the physical layer towards your parallel ports but it is a bit of an 'experts' solution. Has any reader come up with a better way of doing things?

Richard Fearn is hankering after the good old days:

"I have a large collection of 40 track and 80 track 5.25in floppy discs lying about from my days on the BBC Master. I was once able to look at these discs on an A310 in my old school's computer room but now I have left the school I am unable to do this.

"Is it possible for me to connect a 5.25in floppy drive (40/80 track) to my A5000? If so what hardware/software would be required in addition to the drive itself? If it isn't possible to connect such a drive to an A5000 which Acorn machines can I attach one to? Or could I do some sort of serial port transfer (using a BBC Master with a drive attached)?

"All I have is the program I used on the A310 at school – a PD program called DFSReader, version 0.01, written in March 1990. It displays the files that are on a BBC disc in its own filer window and files can be dragged from this to a hard disc, and so on. I'd be very grateful if you could help me with this as I have a lot of software and games from the 8-bit era which I'd love to be able to get at.

There is a moral here, you should have transferred all the discs across while you had the chance, especially as you could fit about 10 of the old discs onto one modern floppy. As time passes this sort of thing gets harder because most people needing to do it have done it. It is not so simple fitting an old disc drive onto a modern computer and the best bet would be to use a serial link from the old computer while it is still working. There are a few PD applications that will allow you to transfer files like this but they are old and you might have to search around until you find one that will work with modern computers. AU

ADVERTISERS' INDEX

Don't risk missing your copy of ACORN USER

Hand this form to your local newsagent TODAY and he'll make sure you never miss out!

Please reserve a copy of Acorn User magazine every four weeks until further notice.

☐ I will collect

☐ I would like it delivered to my home

Name ....

Address ....

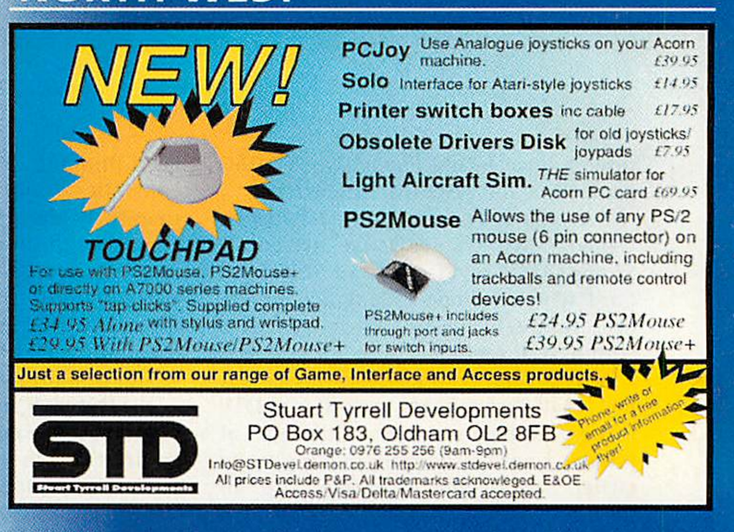
....

....

.... Postcode ....

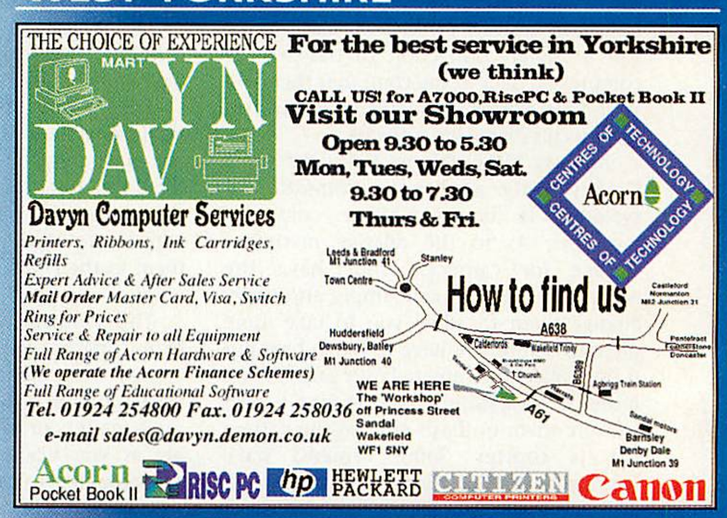
A message to the newsagent: Acorn User should be available from your local wholesaler. If not, contact the Circulation Manager, Darren Whiteman on 01625 878888.

NORTH WEST





WEST YORKSHIRE



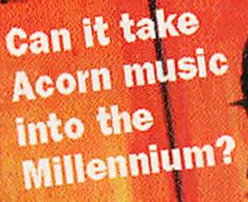
WILTSHIRE



Educational Consultancy Training and Support
Acorn Computer Supply and Installation
Software Upgrades and Repairs

Tel - 01225 764863
Fax - 01225 761437
email itscon@argonet.co.uk

Over £100 worth of magazines and software for just £39.99



Subsc

ACORN

the world's numb

You already know what a great magazine ACORN USER is. It is the only Acorn magazine with up-to-the-minute Acorn news, in-depth hardware and software reviews, and without doubt the best cover discs available.

What you might not know is that by taking out a subscription today, not only are you guaranteed never to miss an issue of the biggest and best Acorn magazine in the world, but you can also claim an excellent free gift or special offer, available exclusively to all new ACORN USER subscribers.



Textease

ONLY £20 RRP £49

The most flexible, straightforward and comprehensive word-processor and desktop publisher ever. Use it to make letters, invitations, cards, banners, notices, posters, overhead foils, in fact any kind of text and graphics. It is designed to be ideal for children and is invaluable for older children and adults.

Rhapsody

FREE RRP £59.99

Your chance to compose your own musical score. Rhapsody allows you to modify and manipulate music as a word-processor does text. You can enter score by hand, note by note, or, if a MIDI Interface is fitted to your computer, you can play a tune using a MIDI keyboard and capture the music in Rhapsody. The music can then be transcribed ready for editing, replaying, etc.

Anagram Genius

FREE

Prepare to be astounded! Seven years of development have produced the world's most sophisticated anagram generator. Give the software a name or piece of text and it will use powerful artificial intelligence techniques to rearrange the letters to say wierd and wonderful things about it.

On the brink

ONLY £15 RRP £19.99

The Crash of the Bank of England? Collapse of the Government? Just what difficulties will the Year 2000 cause you? The "On the brink..." video is a non-technical explanation of the potential impact of the Millennium Bug in the world's computers and what you need to do about it. Nearly £5 off when you order with your subscription. Full information on page 14.

Acorns into China

Take this opportunity to support Steve Turnbull as he rides again for mencap over 250 miles from the Mutianyu Great Wall to Tiananmen Square on behalf of the Acorn community. Just add your donation when you subscribe.

Mencap aids people with learning disabilities with education, employment and housing.

ribe to

USER

CURRENT SUBSCRIBERS – you can take advantage of these offers by renewing your subscription at any time

er 1 RISC OS magazine

Call our 24-hour Subscription Hotline
Tel: 0870 606 0424
Fax: 01369 701 187
Email: dbscot@globalnet.co.uk
Please quote code 'A9902' when subscribing by phone

SUBSCRIBING HAS NEVER BEEN EASIER

DIRECT Debit

Why not make your subscription even easier and subscribe by Direct Debit, spreading the cost of your subscription over quarterly hassle-free payments. Over a year you will receive 13 copies of Acorn User. What's more, you need never worry about missing an issue again, as the subscription continues until you decide to cancel. Direct Debit subscriptions cannot be taken over the phone or by fax.

Binder and 2 free magazines

Exclusive to Acorn User this binder will hold up to 13 issues of your favourite magazine. PLUS receive an extra two magazines absolutely FREE!



All our software offers are StrongARM compatible.

Yes! I will subscribe...

1

Name........................ Age..........

Address..............................

....

....

Postcode.................Tel.................

E-mail address..............................

2a

Please send me the following FREE Gift/Special Offer (tick one):

4247 ☐ Rhapsody FREE
4258 ☐ Anagram Genius FREE
4248 ☐ TextEase £20
4772 ☐ Y2K Video £15
4705 ☐ Binder & 2 mags FREE

2b

I would like to donate to mencap via Steve Turnbull's China Bike Ride (enter donation amount, minimum of £5 please)

4773 ☐ Donation to China Bike Ride £ _______

3a

There's never been a better time to subscribe so take advantage of one of these offers TODAY. See section 2.

A9902UN ☐ UK £39.99 A9902EN ☐ EU £53.99 A9902WN ☐ World £68.99*

To renew subscription, please tick:

A9902UR ☐ UK £39.99 A9902ER ☐ EU £53.99 A9902WR ☐ World £68.99*

*Unfortunately World subscribers are not eligible to receive the free gift/special offer

I wish to pay by:

☐ Cheque/postal order made payable to Tau Press
☐ Credit card (Visa/Access/Barclaycard/Mastercard/Eurocard/Connect)

Expiry date ☐ / ☐ Signature..............................

Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

3b

Instruction to your Bank or Building Society to pay by Direct Debit

DIRECT Debit

Please enrol me as a subscriber to Acorn User.

4210 ☐ with payments of £9.99 by continuous quarterly direct debit (See section 2) Your subscription will continue until you cancel

Name of Bank/Building Society..............................

Address..............................

....

Name of Account Holder(s)..............................

Bank/Building Society Account No. ☐☐☐☐☐☐☐☐

Branch Sort Code ☐☐ ☐☐ ☐☐

Date.................. Signature(s)..............................

Instruction to your Bank or building society: Originator's ID No. 851412

Please pay IDG Media Direct Debits from the account detailed in this Instuction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this Instruction may remain with IDG Media and, if so, details will be passed electronically to my Bank/Building Society. Ref No. AU204



Signature..............................

Date..............................

4

Now send your completed form and payment to:

Acorn User, Tau Press, PO Box 9, Dunoon, Argyll PA23 8QQ. Please state if credit card billing address is different from the delivery address. Photocopies or handwritten versions of the above information are acceptable.

This guarantee should be detached and retained by the Payer.

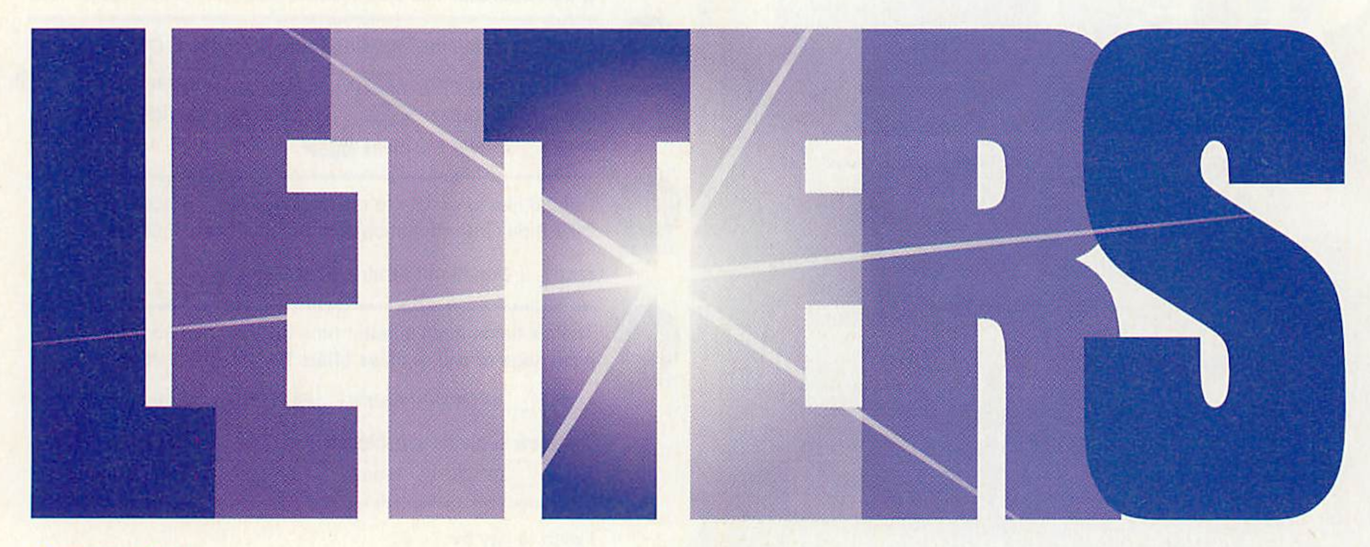
The Direct Debit Guarantee



- This Guarantee is offered by all Banks and Building Societies that take part in the Direct Debit Scheme.
- If the amounts to be paid or the payments dates change IDG Media will notify you 14 working days in advance of your account being debited or as otherwise agreed.
- If an error is made by IDG Media or your Bank or Building Society, you are guaranteed a full and immediate refund from your branch of the amount paid.
- You can cancel a Direct Debit at any time by writing to your Bank or Building Society. Please also send a copy of your letter to us.

Write to Acorn User, Tau Press, Media House, Adlington Park, Macclesfield, SK10 4NP. E-mail: letters@acornuser.com





Commentary

I read the two news items in the Christmas issue regarding the happenings around Acorn's Workstations division, Phoebe and Castle Technology. And I must admit they are rather interesting – interesting to see how immature the professional Acorn community is.

Did you really think that a few dealers putting £500 alms in an Phoebe charity box would be taken seriously? Even end users could fork out that much to participate. Besides, if that £500 charity was the most that could be asked to everyone the primary Steering Group members should have been smart and contacted every Acorn dealer worldwide to participate. The complete worldwide dealer list was on Acorn's website. Even I could have spend £500 for a Phoebe resurrection funds and I am a very small dealer. Then there would have been a serious amount of money to start negotiating with.

My second remark is. Why couldn't they talk to Acorn directly, something Jack Lillingston did? No bribe or charity money from him. Just plain business. He apparently saw what Acorn's problems were (distribution and marketing) and took that problem out of their hands. Whether he'll have more success remains to be seen especially after Acorn themselves destroyed the current Risc PC market with their broken promise of newer and better hardware.

Another point you wrote regarding the efforts from the Tulip company (sic) "Acorn feared losing key engineering staff to the new proposed company" but how could that be since Acorn had already dumped most of their "key engineering" staff previously at the Workstation's closure?

All this led me to believe that: Acorn doesn't want anyone to know about their latest computer design and OS technology; Acorn wants to keep the door open for their own developments to be sold (later on) on the general market.

One of Acorn's strangest points is that Acorn's engineering staff seems anxious to develop innovative computing applications but they are never willing to promote and sell their designs into actual products. This problem is even known among the Acorn magazines and at many occasions put to question. It's like they always have something else they want you to wait for.

But unfortunately the "big" thing never happens. There's always a reason, usually financial, that's a letdown. I've even spoken with people who were prepared to actually manufacture RISC OS-based products but were let down by Acorn's unwillingness to provide technical data at reasonable costs.

Things naturally gets worse when they get commissioned to perform certain work when Acorn says after it's finished: "Well, It's finished, it works great, it's even better then we expected so we decided that you can't have it."

I can imagine that one of the major problems in current stakes is the NCI deal

Super service

Last Thursday, I was trying out my new BJC4300 scanner for the first time in anger, and found that after I ran a calibration, that all the black areas in the image came out covered with bright specks. After much experimentation with gamma corrections and things with no success in fixing it, I concluded that there must have been a problem with the calibration routines in the Twain driver.

On Friday lunchtime, I e-mailed David Pilling and explained the situation, including a couple of example scans to illustrate the problem. Within a couple of hours he replied, saying he would have a look at it straight way – even though I had told him it wasn't an urgent need.

A few hours later he sent another mail saying he could not find a numerical overflow/underflow problem in the calibration routine (which is what the nature of the problem suggested) but if I could send him my calibration file he would investigate further. Unfortunately I didn't re-check my mail until about 9:30 that evening and so it wasn't until then that I sent him the file. I naturally thought that I wouldn't hear anything more until Monday morning.

But no! There, waiting for me on Saturday, was a fixed version of the driver, sent to me at 3:15am that morning. Now that's what I call excellent service and real customer dedication.

I can only imagine what I would have got from a PC retailer if I had been using a Windows machine – no doubt a blank expression, a shrug of the shoulders and the inevitable response "Have you tried re-installing Windows?"

Well done, David, and keep up the good work – but try not to lose too much sleep.

Andy Pickering
andy@surtsey.demon.co.uk



that went sour. Probably because Acorn admitted that they'd spend some of the money received from Oracle on new desktop computer designs while it was intended for NC-technologies.

Also the fact that Acorn always want to push people into their A7000-based systems, whether they're disguised as NC's, set-top boxes or motherboards, is something that raises many questions. All we ever see in actual products is ARM7500 based. Look at the various supposedly forthcoming RISC OS clones (Medi and Peanut), look at current NC's on the market, ESBA evaluation boards and not to forget the talks between Acorn and Tulip were yet again for disguised A7000's.

Again this led me to the conclusion that Acorn is up to something. An act they once performed at the end of 80's when the world was still convinced that Acorn's legacy were only 8-bit BBC computers. Is Acorn yet again closing itself off from the rest of the world to develop something stunning?

As a well-known TV-personality would say: "The truth is out there!"

Manuel Timmers
starcorp@innet.be

To comment on your last question first: No, Acorn aren't being clever. They are changing their name and distancing themselves as far as they possibly can from the desktop computer market.

Your scorn for the Steering Group is rather mis-placed, at least there are people willing to spend time to try to handle this unpleasant situation. The first meeting, at which the £500s were pledged, was attended by some very dedicated dealers and developers who were willing to put forward money to finance Peter Bondar in his negotiations. Those donations were only the first instalments of what could have been quite serious amounts of money. And still could be despite the loss of Peter from the equation.

Jack Lillingston of Castle Technology was actually just doing what he's always done in the past – whenever an opportunity arose to pick up stock from Acorn he would be in there and selling it. This meant he built up a good relationship with Acorn and was able to step in rapidly when the fateful decision had been made.

These people care as much for the RISC OS platform as you do – and certainly a great deal more than Acorn's new management.

Air your views

If there's something you want to 'get off your chest' or you have some interesting information for your fellow Acorn User readers, then write in to:

Letters page, Acorn User,
Media House, Adlington Park,
Macclesfield, SK10 4NP
or e-mail: letters@acornuser.com

Please note that we do not guarantee a personal reply to letters.





the Regan files

Paul McKinnon

If you asked most people what they enjoyed about the Acorn market, it's likely that "foreign travel opportunities" wouldn't be very high on the list. It is, though, with Paul McKinnon, Sales and Marketing Manager at Atomwide and formerly at Cumana and Simnett.

'When I was at Cumana, I had something of a reputation,' Paul admits. 'Any Acorn Roadshow or event that ever happened, you could get me there at the opening of a envelope. I did the Australian and New Zealand roadshow in '93, and I did South Africa in '94 – one of a very select group.'

Needless to say, he also toured the UK and Ireland. While he'd often return with a hefty expenses bill, his then boss John Simnett always believed it was worth it.

'He'd say: "As long as you're going to work hard, I don't mind you playing hard." The socialising aspect is in fact more important than the office meetings a lot of the time, because when you sit in the bar and have a chat with a set of IT advisors you're doing work for, but what you're *also* doing is building friendships and trust.'

The idea of building friendships and trust is one that Paul has carried over to Atomwide, which he joined in early '96. He stayed with Cumana during the difficult period when it went into voluntary liquidation and was bought by Economatics, but left soon afterwards, finding the new management something of a culture shock. He'd toyed with the idea of joining Atomwide for a while, but had always teased Martin Coulson (Atomwide's MD) that Atomwide couldn't afford him.

Fortunately, early '96 saw the launch of Xemplar, giving Paul the perfect excuse to join Atomwide as an Xemplar agent, and giving Martin the perfect excuse to hire him.

'Martin has a reputation all his own. We love being like chalk and cheese. He's much more of a techie, and doesn't like doing what I do; he'd rather not talk to customers about money. I quite enjoy it – I get a buzz out of it – and I'm not embarrassed to say: "Look, before we even start, you need to know that we're going to charge you £500 for the privilege of sending an engineer down, but he's a professional person and he'll do it right." There's no free lunch. Everything has to be paid for, so why not be really up front and honest about it?'

> **Most of our business comes from recommendation. I can't remember the last time that we went out and really pro-actively marketed.**

This initial consultancy charge was one of Paul's first innovations at Atomwide, and while it's been controversial it has been a success. Atomwide produces a detailed report for each site, and Paul is more than happy to integrate as much existing hardware into a solution as possible, rather than sell completely new kit.

'The BBC B or Archimedes that was doing a maths program in a primary school in 1988 may be just as relevant today, still doing that same program to the same level of kids with the same learning needs. Why do you need to upgrade it to a PC or an Acorn Risc PC, only to discover that the piece of software that you loved for a decade doesn't work any more?

'Most of our business comes from recommendation. I can't remember the last time that we went out and really pro-actively marketed. We are happiest with the people that come to us and say: "We saw such-and-such a network halfway across the country, and we'd like you to come and do the same." That's the best feeling in the world, and I get more of kick from that than from any percentage response from a mailshot I could ever have.'

Paul's a keen photographer (he provided the photo for the Christmas '95 Moxon Interview with John Simnett), and he also practises clay pigeon shooting and keeps a house full of animals. He's most enthusiastic, though, about his recent hobby of scuba diving.

'I'm trained to rescue diver level, and I've been doing it for about three years. I dive very rarely around England. I've dived in a reservoir under the flight path to Heathrow on my rescue course. You know when people say: "I couldn't see the hand in front of my face," I'd always thought that was like a fisherman's tale. But it's true. You put your hands out and you can't see your fingertips. You're diving in a search pattern with someone next to you, and it's horribly spooky.'

'But the nice part of it is going somewhere like Egypt or the Barrier Reef, and you've got clear blue waters, fabulous temperatures and marine life to die for. It's the one time I can really forget everything; you don't think of anything except what you're doing and what you're seeing.'

Still in it for the foreign travel, then.

Jill Regan

Special Pineapple RiscPC Computer price deals

'Peak Performer'	A7000+, 2Gb hd, 8mb, x32 CD, 14" mon, 80w spkrs (£200 FREE s/ware - (Foundation or Extreme bundle, please ask)	- £ 879 inc vat
'Bronze'	233Mhz SA, 1.7Gb hd, 8mb, x8 CD	- £ 899 inc vat
	233Mhz SA, 1.7Gb hd, 40+2Mb, x8 CD, 2 slot b/plane	- £ 999 inc vat
'Gold'	233Mhz SA, 4.3Gb hd, 64+2Mb, x36 CD, 2 slot b/plane	- £1149 inc vat
'Web Wizard'	233Mhz SA, 1.7Gb hd, 32+2Mb, x24 CD, 15" mon, 80w spkrs (FREE 56k modem, Easiwriter Pro, Browse & Java)	- £1349 inc vat
'High Spec'	233Mhz SA, 4.3hd, 40+2Mb, x8 CD, 586-100 PC Card, PCPro v2 & PC Ex, Windows98, 15"mon, 120 watt spkrs	- £1699 inc vat

Upgrades available with any computer purchase:- Digital monitors 14" £99, 15" £149, 17" £269, Upgrade x8CD to x36CD - £25, Upgrade PCPro to PCPro v3(not inc PC Ex) - £25, Add Studio24Pro - £49

All computers are supplied with Studio 24 v1 software and one years sub to the Virus Protection Scheme. Finance is available on the Acorn items in the above deals, over 12 or 24 months - 9.9% APR

Scanner Best Buys



Plustek 9636P - 600dpi, parallel port model	-	£149 inc vat
NEW!! Epson GT7000 - 600dpi, SCSI	-	£259 inc vat,
NEW!! Epson GT7000 photo, SCSI	-	£299 inc vat

All scanner prices include Imagemaster & Twain software for Acorn +PC

Internet

56,000 Flex modem - Flash U/G	£89.00
Acorn !Browse (CD only)	£39.99
Ant Internet Suite software	£116.33

General Upgrades

Backplanes	
2 slot backplane	£ 34.00
2nd Slice (inc 4 slot backplane)	£ 89.00
Midi Card	
MIDIMax II - Midi Card	£ 92.83
SCSI Cards	
Eesox SCSI II	£145.00
Cumana SCSI II	£175.00
SCSI Cable	£ 16.00

RiscPC Memory

1Mb VRam	£ 69.00
2Mb VRam	£ 89.00
8Mb SIMM	£ 14.00
16Mb SIMM	£ 24.00
32Mb SIMM	£ 45.00
64Mb SIMM	£ 109.00

PC Cards & Software

DX4-100 PC Card	£ 229.00
586-100 (Acorn) PC Card	£ 329.00
586-133 (CJE) PC Card	£ 351.33
PC Pro & PC Exchange	£ 49.95
Windows 98	£ 79.00
MicroSoft Small Business Ed.	£179.00

Monitors

Iiyama 15" 350	£ 175.00
Iiyama 17" 400 (S701GT)	£ 363.00
Iiyama 17" 400 Pro	£ 385.00
Iiyama 19" 450	£ 487.00
Iiyama 19" 450 Pro !NEW!	£ 527.00
Iiyama 21" 501 Pro	£ 821.00
Iiyama 21" 502 Pro	£868.00
CTX mons have (3 year on-site warranty)	
CTX 14" Digital Scan	£ 139.00
CTX 15" Digital Scan	£ 175.00
CTX 17" .28 70Khz Digital	£ 299.00
CTX 17" .26 92Khz Digital	£ 385.00
CTX 17" Futura .25 dot	£429.00
Acorn AKF60 14"	£264.00



Flatbed Colour Scanners

There are now a number of scanners which will work on RiscOS. The Plusteks work on the parallel port so no extra interface is required. All our scanner prices include Twain and Imagemaster software. SCSI scanner prices do not include the SCSI cable.

Studio24Pro with any scanner - add £49	
Epson GT7000 SCSI - !NEW!	£259.00
Epson GT7000 photo - !NEW!	£299.00
Epson GT9500 par&SCSI	£519.00
Plustek OpticPro 9636 600dpi	£149.00
Epson Filmscan 200 (transpar)	£435.00
Canon Canoscan 2700F (trnsp)	£557.00

SCSI Cards & Cables

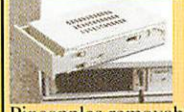
Cumana SCSI II Card	£175.00
EESOX SCSI II Card	£145.00
50 mini 'D' to 50 Centronics	£16.00
50 mini 'D' to 25 'D' plug	£16.00
25 'D' plug to 50 Centronics	£13.99

Switch Boxes

These are ideal for parallel port switching between a printer & scanner

Parallel 2 way	£16.99
Parallel 4 way	£19.99
Serial 2 way	£19.99
25 'D' plug to 25 'D' plug	£4.99
25 'D' plug to 36 Centronics	£4.99
Monitor+Keyboard 2 way	£19.99
15way HD to 15way HD cable	£4.99
15 way HD fully screened	£16.99
Male-male mini DIN keybrd cab	£3.00
Mini DIN to 5 pin keybrd adptr	£1.50
5 pin DIN to 5 pin DIN keybrd	£2.50

Many other types also available please ask



Hard Drives

Pineapples removable drive system is available for IDE and SCSI systems.

IDE removable system	£19.00
SCSI removable system	£25.00
IDE or SCSI cable	£5.00

Bare IDE harddrives

1.2Gb IDE	£40.00
1.7Gb IDE	£50.00
2.5Gb IDE	£99.00
4.3Gb IDE	£124.00
6.4Gb IDE	£159.00

IDE Expansion

x4 IDE Expansion card	£69.00

Bare SCSI harddrives

1.0Gb SCSI	£99.00
4.2Gb SCSI	£219.00
6.4Gb SCSI	£299.00
9.1Gb SCSI	£575.00

ZIP parallel port drives

Iomega parallel port ZIP drive	£149.00
Iomega SCSI internal ZIP	£129.00
Iomega internal IDE ZIP (for use with IDE expansion card)	£75.00
100Mb ZIP cartridge	£9.99
Pack of 5 Zip Cartridges	£45.00



Studio24Pro

'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool'- *Acorn User Mar96*

Now just ★ £99.00 ★

Users note FREE update v2.16 is now available.



PAL TV Coders

We now have two PAL TV coders available which allow the output of any Acorn Computer to be displayed on a normal TV or recorded onto a video recorder. Both models have S-VHS as well as standard video outputs. The VGA converter works in VGA and SVGA screen modes and is ideal for the RiscPC. Please ask for more info.

VGA Converter PAL Coder	£159.00
PLC/4 PAL Coder (mode 12,15) for A3020,A4000,A5000,RiscPC	£99.00

Pineapples Virus Protection Scheme has been running for over five years and is still being updated with new viruses on a regular basis. New software versions are sent out to members every three months and the total number of viruses which can be removed is over 100.

Joining fee just £28.20

Inexpensive multi-user licences

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternative - 'Acorn User Feb 96

As an Acorn Centre of Technology Pineapple can help you with ALL your Acorn computer related problems.



Colour Printers

Canon BJC250	£149.00
Canon BJC620 - colour	£229.00
Canon BJC4300	£198.00
Canon BJC4550 (A3)	£287.00
Canon BJC5500 (A2)	£649.00
Epson Stylus 200 mono	£139.00
Epson Stylus 200 colour	£179.00
Epson Stylus Colour 440	£139.00
Epson Stylus Colour 640	£179.00
Epson Stylus Colour 850	£279.00
HP Deskjet 690C	£259.00
HP Deskjet 870C	£369.00
HP Laserjet 1100 (laser mono)	£289.00

Other Items

Acorn !Browse (CD only)	£39.99
Acorn RiscCafe (JAVA)(CD)	£39.99
RiscOS 3.7 upgrade	£64.62
RiscOS3 PRM vols 1-4	£99.95
RiscOS3.6 PRM vol 5a	£29.75
Sibelius Junior v3.0	£55.00
Sibelius 6 software v3.5	£115.00
Sibelius 7 Student v3.5	£351.00
Sibelius 7 software v3.5	£699.00
Acorn Netstation (Ethernet)	£351.33
Acorn Netstation (Modem)	£351.33
A7000 upgrade to A7000+	£249.00

We have many items in stock which are not shown in this advert. Please ask for anything you require which may not be shown. We also undertake repairs and upgrades to all Acorn computer models. Collection can be arranged if necessary.

Pineapple Software

352 Green Lane, ILFORD
Essex IG3 9JS

Tel 0181 599 1476 Fax 0181 598 2343

email:- sales@pineaple.demon.co.uk
www:- http://www.pineaple.demon.co.uk

Terms:- All prices *include* 17.5% vat. Carriage £15 on computer systems. £5 on most other hardware. Small items £3 (or less). Phone for quote outside UK. Official orders, cheques and all major credit cards accepted at no extra charge.

'Pineapple offer some of the finest and friendliest after sales support you will find' - Acorn User Mar 96

Why not come and visit us and see most of the Acorn range of computers and hardware. Monday - Friday 0900 - 1730 Saturday 1000 - 1700

